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Telephony®

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DDD IN PBX'S

Convenience, efficiency and speed of Direct Distance Dialing being explained by Miss Janet Ireland, PBX adviser, to attendants at Hanover, Pa. (United Utilities System) before introduction of DDD. Story on PBX customers, page 21.

MANAGEMENT • PLANT • TRAFFIC • COMMERCIAL • LEGAL • ACCOUNTING

...lowest-priced high-density

single sideband multiplex

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by Stromberg-Carlson!

This is one compelling reason for specifying "511" Multiplex when you plan your microwave system. Here are a few more.

1. "Noted for its flexibility."* You can easily add or drop off channels anywhere along the line.

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4. Expandable to meet channeling needs. You can get up to 240 high-quality channels.

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*Quoted from article in MODERN RAILROADS, March, 1960.
**Company names on request.

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A DIVISION OF **GENERAL DYNAMICS**

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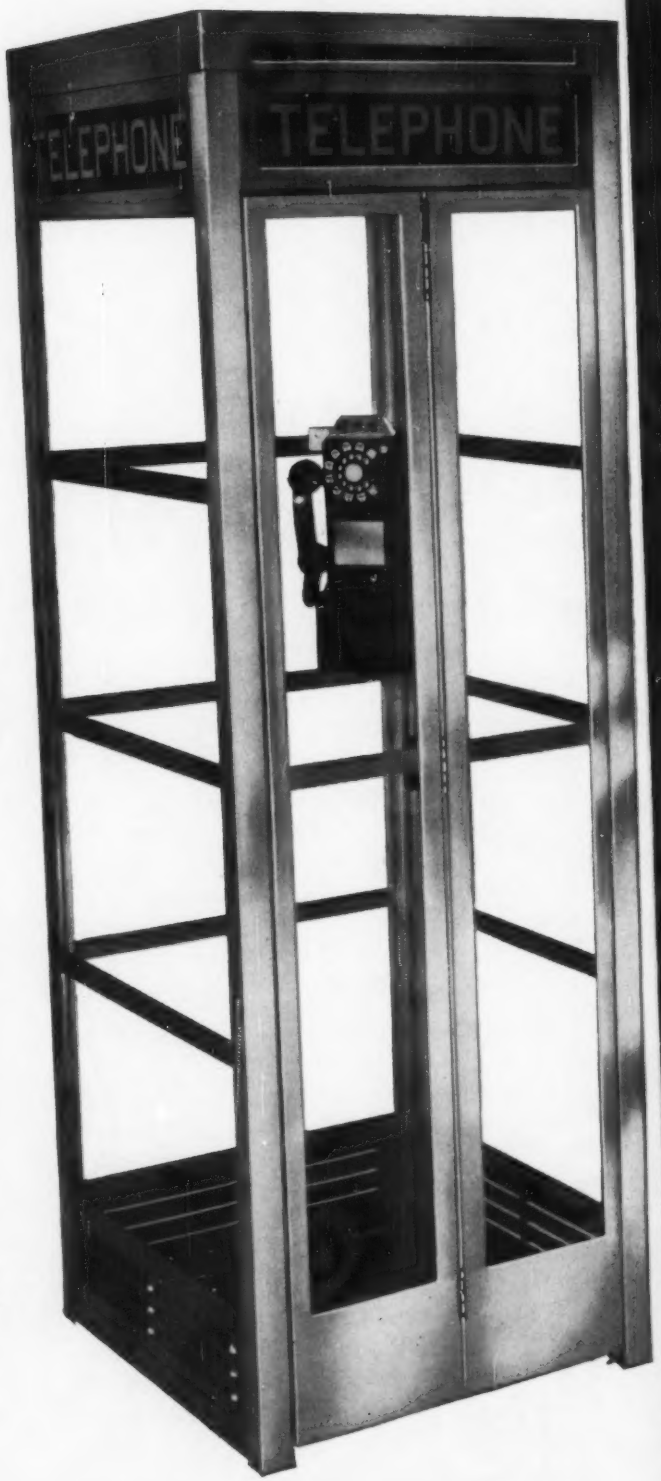

Fits where no booth ever fitted before... stacks closer in high-revenue locations!

This new Alcoa® Aluminum "Compact" indoor booth adds revenue by providing convenient service with complete privacy in places no booth ever fitted before. Just 28¾ in. square, it takes 26 per cent less area than its bigger brother . . . saves valuable floor space in supermarkets, drugstores, office buildings, department stores and other busy locations.

Its flush roof lets the Alcoa "Compact" booth stack closer in tandem where traffic dictates to earn more revenue per square foot of floor space than any booth made before. Designed to harmonize with modern decor, the Alcoa "Compact" booth attracts passers-by with its clean appearance and slim lines. Ceiling vent fan and louvered bottom panel are optional.

Maintenance: minimum! Solidly built of heat-treated Alcoa Aluminum Extrusions, the Alcoa "Compact" booth resists damage and vandalism. Alumilite* finish stays bright and shiny with just an occasional washing down.

*Trade Name of Aluminum Company of America

Contact your telephone supply jobber for more information on the new Alcoa "Compact" indoor booth, or write for free folder: Aluminum Company of America, 1720-G Alcoa Building, Pittsburgh 19, Pa.

ALCOA ALUMINUM

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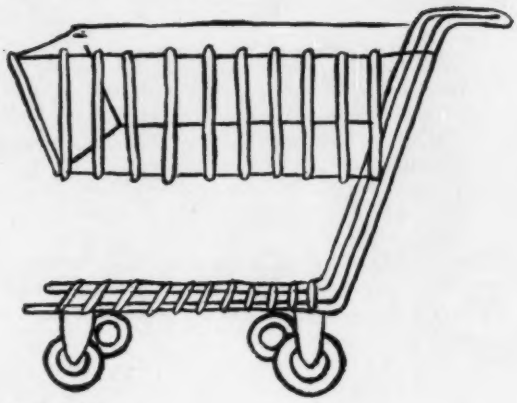
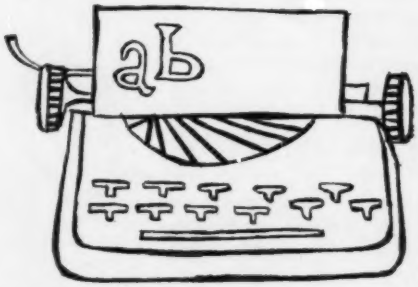


Supermarkets

Drugstores



Office Buildings

Department Stores

FLASHES AND PLUGS

COOPED-UP CONNECTION. Southwestern Bell Telephone Co. *News* reports a request for an extension in an unusual place. The subscriber wanted a telephone installed in a pigeon coop.

It seems his hobby is racing homing pigeons. The birds are released at a distant point, and they fly back to their home coops as fast as they can. Since the first pigeon back home is the winner, split-second timing of the race is necessary.

The subscriber explained he sometimes gets a call from another racing enthusiast to find out if his flight has returned.

Several times his birds have come back while he was gone to answer the telephone, and he's missed the exact arrival time—costing him the race.

With the newly installed extension in the pigeon coop, he can talk and time the flights at the same time.

•

HELP WANTED. The conceited individual was loudly telling his companion, and the world, about his accomplishments.

"I tell you I started with nothing," he proclaimed. "I am a completely self-made man."

A sad little fellow looked up.

"I sympathize with you, friend," he said. "I'm no good at these do-it-yourself projects either."

•

TOOK THE SCENIC ROUTE. A certain train had been late every day for a year. But one day it rolled into the station exactly on time.

The surprised and delighted passengers got together and made up a handsome purse for the engineer, and presented it to him, commending him for being on time at last.

The engineer refused the purse, saying, "Gentlemen, it breaks my heart to refuse, for I need the money, but this is yesterday's train."

•

BY JET OR JUPITER? The lecturer in the village hall began his talk with, "Now you all know what a molecule is."

Interrupting him, the chairman of the meeting said, "Most of us do, but perhaps you'd better explain for the benefit of those who never have been up in one."

•

REAL ANC VOTE! Dick Kidson, a columnist for the *Los Angeles Times*, opined recently he had noted with disappointment that in the new Pacific Telephone & Telegraph Co., directory, the code to Las Vegas is 702, a combination of what is known in gambling terms as a natural and craps with nothing in between.

He commented that the authors of the code could have scored with him, had they made that combination 711.

CHANGE OF ADDRESS

Please notify your local postmaster and the Circulation Department of TELEPHONY of change of address. Change cannot be made without the old as well as the new address. Allow three weeks for change of address to become effective.

Telephony

THE JOURNAL OF THE TELEPHONE INDUSTRY
Since 1901

July 9, 1960

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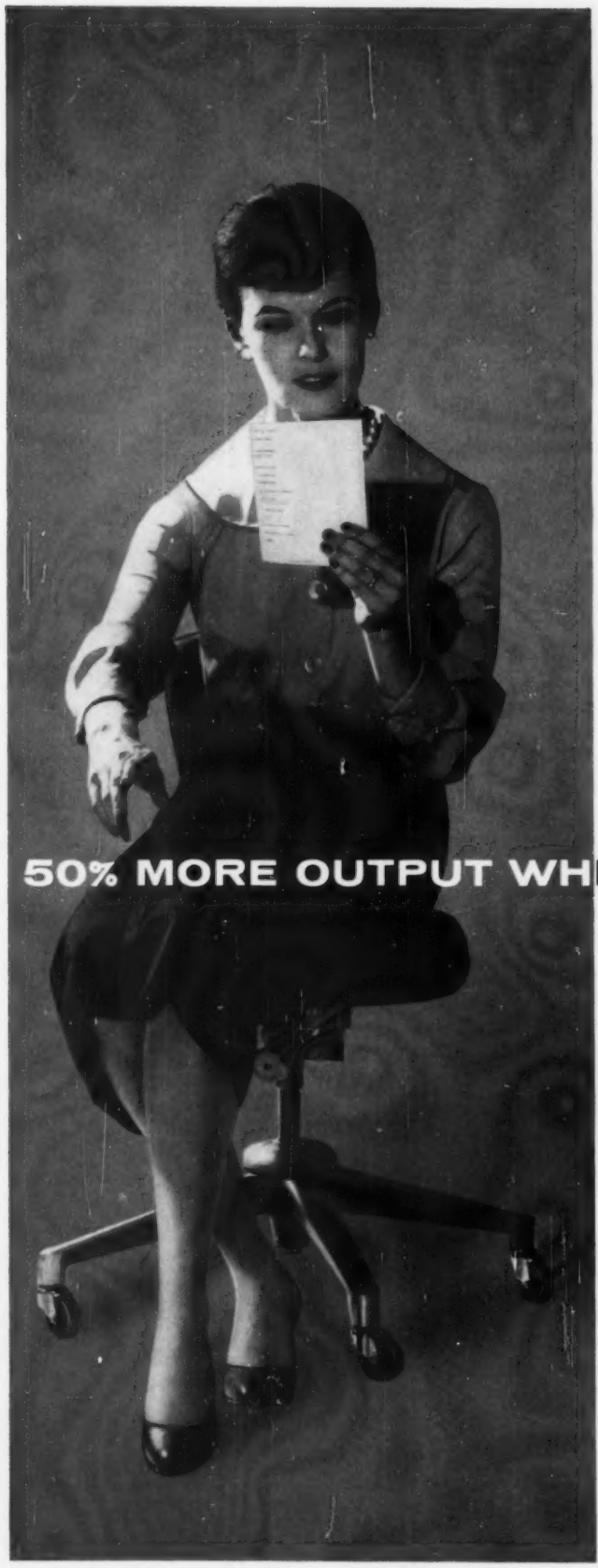
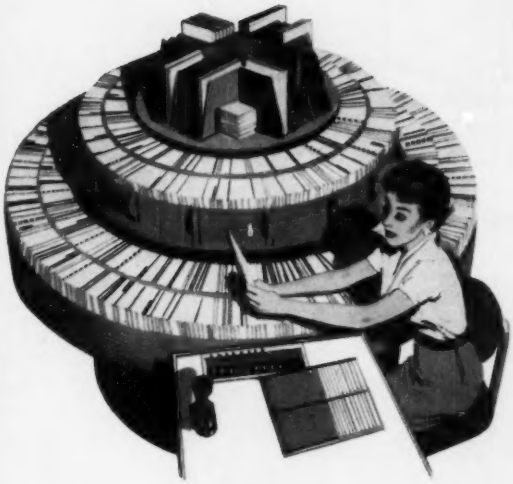


50% MORE OUTPUT WHEN SHE STAYS PUT



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Address_____ City_____ Zone_____ State_____

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GENERAL SYSTEM
Subsidiary of
GENERAL TELEPHONE & ELECTRONICS

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This is the kind of PBX switchboard any businessman will appreciate!

Leich's L55 PBX has a unique keyboard arrangement for faster, surer handling of calls. A compact formica-type cabinet is a handsome addition to the most modern office. All the modern service features are available.

Unique Keyboard Arrangement

Both push-button ringing keys and twist-push talk keys are in a sloping position above the writing shelf. The attendant extends calls quickly, and the writing shelf is completely free of keys so she can perform other office duties.

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***Plus...*Jack-in Circuits: A Cost-Cutting Bonus For You**

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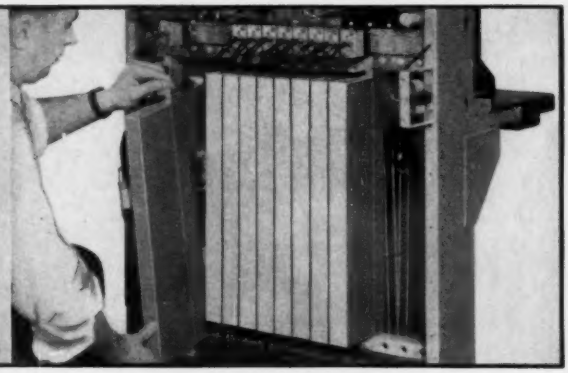

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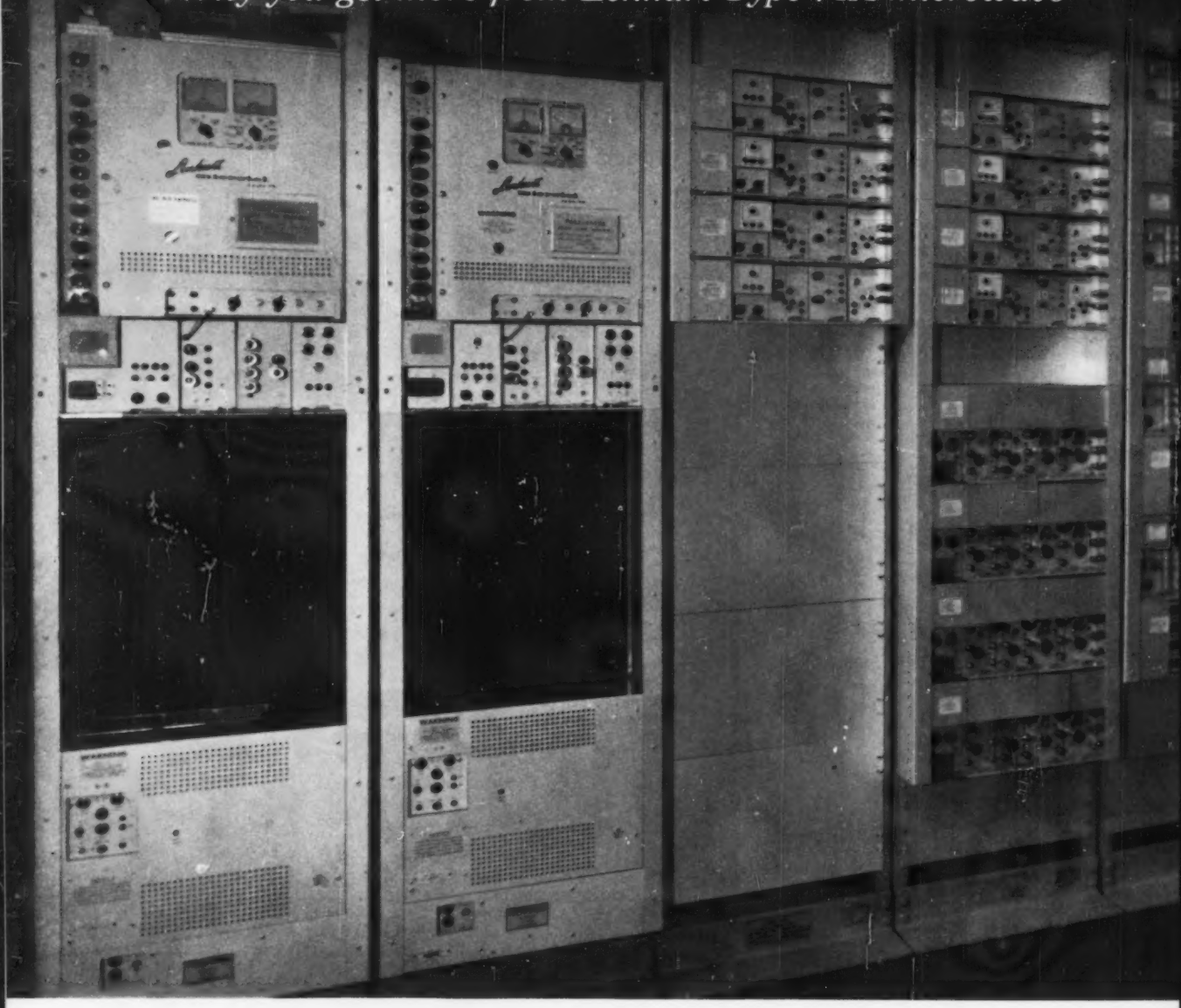
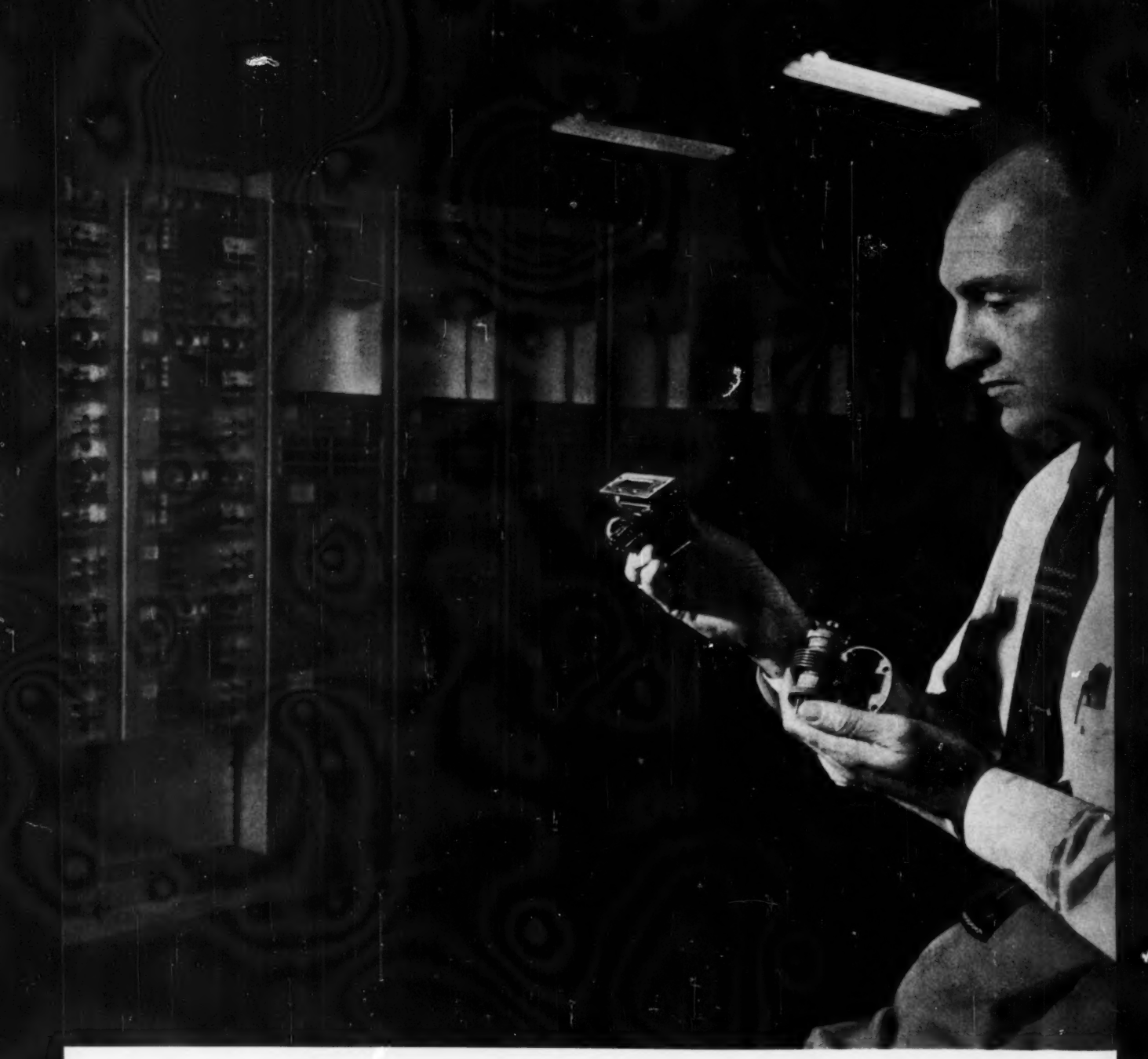
Why you get more from Lenkurt Type 74A microwave –



Only *Lenkurt* microwave has tomorrow's

The Federal Communications Commission has proposed an immediate tightening of microwave frequency tolerances from today's ± .05% to ± .005%. Industry representatives have counter-proposed an immediate reduction to ± .02%, with a further reduction to ± .01% in 1965.

Lenkurt Microtel microwave equipment, alone, *already* meets the ± .02% requirement *without modification or additional equipment*. In fact, *existing* installations, with only a minor modification, will be able to hold a tolerance *better* than ± .01% . . . *better* than the industry's recommendation for 1965!



frequency stability already built in

Lenkurt Microtel achieves this performance because circuits and components were designed with tomorrow in mind. The heavy-duty one-watt klystron and the Invar reference cavity, for instance, neither use nor require temperature control to meet specifications. And automatic frequency control of the transmitter is *standard* on Lenkurt Microtel . . . it's not even available on most other microwave systems!

Our customers have come to expect such advanced thinking and engineering in all Lenkurt telecommunications products. Such "engineering for the future" saves you money, both in freedom from obsolescence and in greatly reduced maintenance expense.

With a complete product line, our experienced staff engineers are able to plan your systems efficiently and objectively. Call or write your nearest Automatic Electric representative, or the Director, Carrier & Radio Sales, Automatic Electric Sales Corporation, Northlake, Illinois.

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☐ K-24 ☐ K-31 ☐ K-32 Carrier Systems

☐ Please arrange to have an engineer call to appraise our Carrier needs

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Title_____

Company_____

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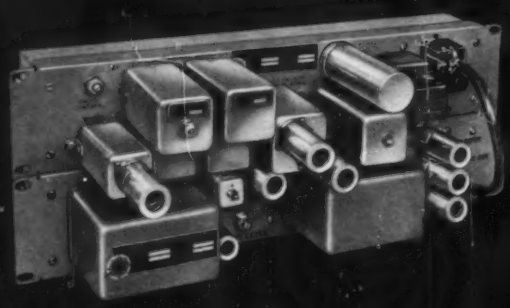

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LINES

LOOK WHAT NORTH SUBSCRIBER CARRIER WILL DO FOR YOU

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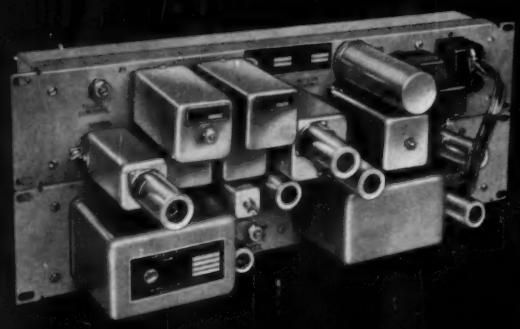

You can provide service for new subscribers adjacent to lines now filled—reach new subscribers beyond present lines—free physical circuits for pay station or other special revenue service—meet demands for special temporary service—offer improved service to subscribers on overcrowded lines!

Talk to your North Carrier Engineer. Let him show you how North NS-102 Divided Ringing Carrier or North NS-101 Bridged Ringing Carrier can improve your subscriber service immediately without the financial burden of physical line construction.

North Subscriber Carrier is low in initial cost, easier to maintain thanks to North's simplified circuitry and embodies many improvements engineered to help make your operation more efficient and more profitable.

(Ask your North Carrier Engineer about the special North Carrier schools for your personnel, too.)

Welcome your North Carrier Engineer—he's there to help you—he proudly represents

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NORTH ELECTRIC COMPANY

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TRANSISTORIZED
"X" CARRIER SYSTEM

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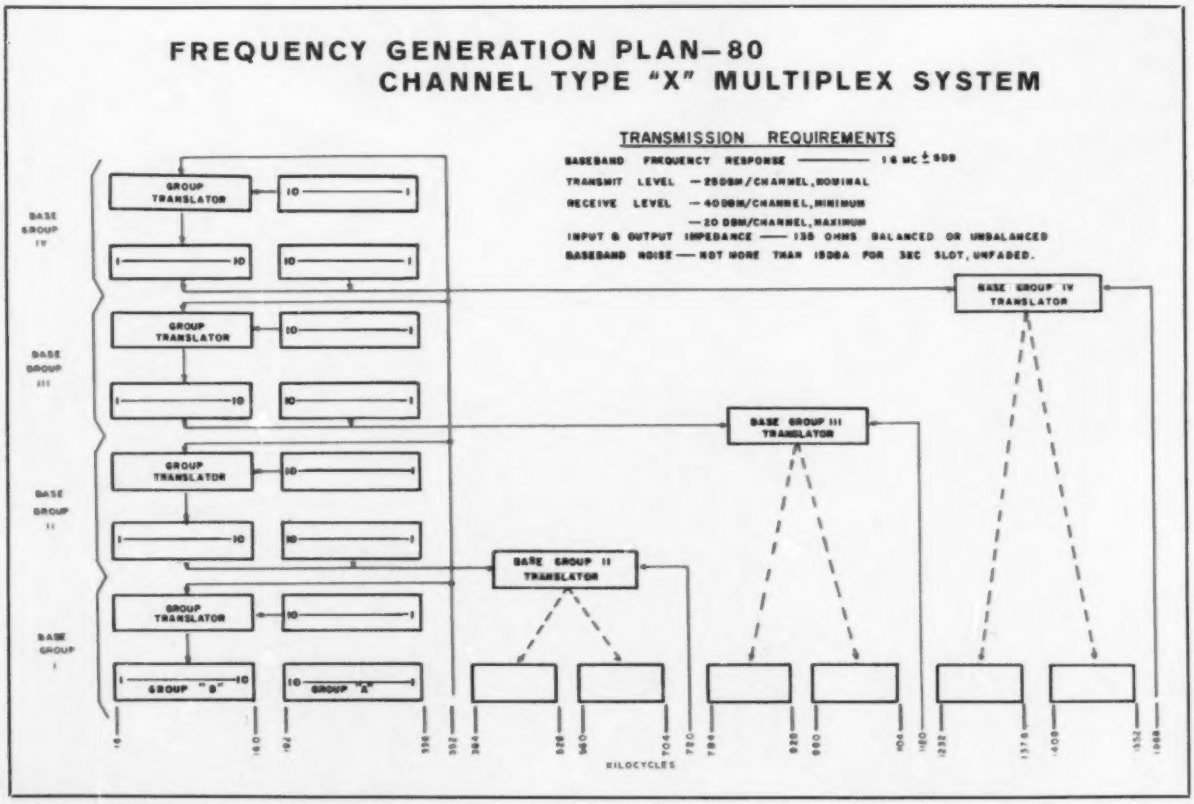
FREQUENCY GENERATION PLAN—80
CHANNEL TYPE "X" MULTIPLEX SYSTEM
TRANSMISSION REQUIREMENTS
BASEBAND FREQUENCY RESPONSE ——— 16 MC ± 500
TRANSMIT LEVEL —25DBM/CHANNEL, NOMINAL
RECEIVE LEVEL —40DBM/CHANNEL, MINIMUM
—20 DBM/CHANNEL, MAXIMUM
INPUT & OUTPUT IMPEDANCE —— 135 OHMS BALANCED OR UNBALANCED
BASEBAND NOISE — NOT MORE THAN 15DBA FOR 3EC SLOT, UNFADED.
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BASE GROUP III
BASE GROUP II
BASE GROUP I
GROUP TRANSLATOR
GROUP "B"
GROUP "A"
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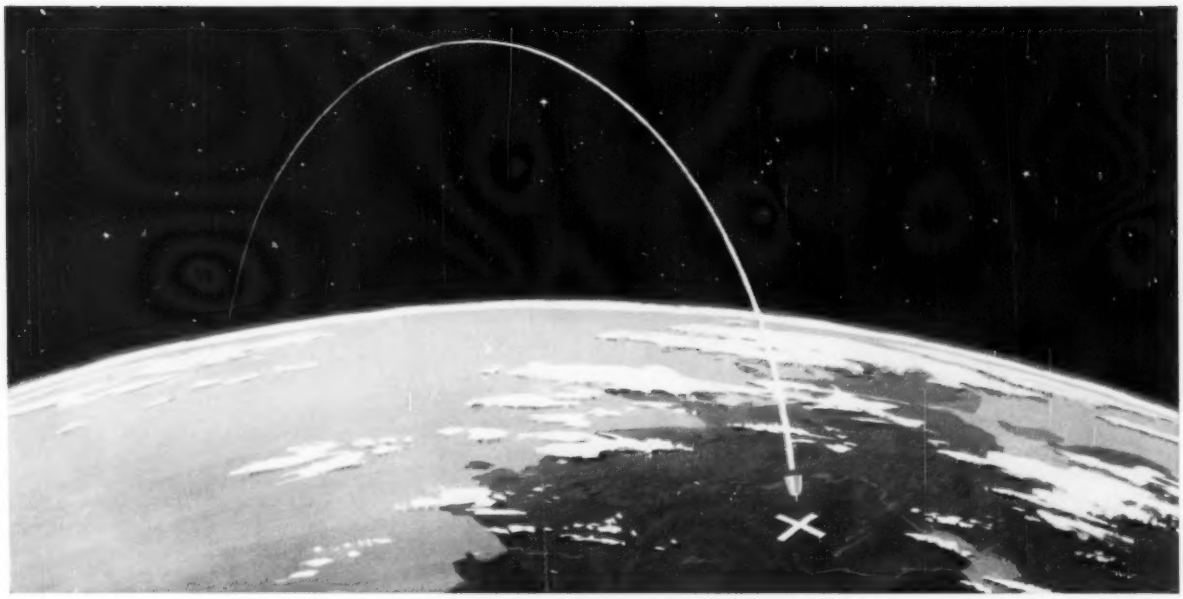
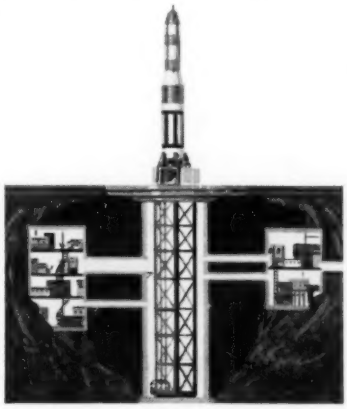


ASSIGNMENT: HIT A TARGET 6000 MILES AWAY

Can you guide a 110-ton Air Force Titan missile far up into the sky, to bring its nuclear warhead down with pinpoint accuracy on a target one-fourth the way around the globe—a target you not only can't see but which continually moves with the spinning earth?

This was the problem in missile guidance the Air Force presented to Bell Telephone Laboratories and its manufacturing partner, Western Electric. The answer was the development of a command guidance system which steers the Titan with high accuracy.



Unlike self-contained systems which demand complex guidance equipment in the missile itself, Bell Laboratories Command Guidance System keeps its master control equipment on the ground where it can be used over and over again. Thus a minimum of equipment is carried in the missile, and the ground station has full control of the missile during its guided flight. Techniques drawn from the communications art render the system immune to radio jamming.

Bell Laboratories scientists and engineers designed the transmission and switching systems for the world's most versatile telephone network, developed much of our nation's radar, and pioneered in missile systems. From their vast storehouse of knowledge and experience comes the guidance system for the Titan.

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IN THE NATION'S CAPITAL

BY FRANCIS X. WELCH, WASHINGTON EDITOR
AND EDITOR, PUBLIC UTILITIES FORTNIGHTLY

In answering question: Where is commission regulation going?, finds it worth-while to review patterns of regulatory change, noting past results, present shortcomings and alternatives.

WITH Congress recessing instead of adjourning over the two political party conventions in July, a good many bills in Congress have been suspended in a sort of limbo until Congress gets back to complete its chores for the session next August. Among these is the Wage-Hour amendment to the Fair Labor Standards Act, which means a great deal to some telephone companies, particularly smaller Independents. But since the possibilities of further congressional action are now badly scrambled, this might be a good time to consider some more fundamental problems of regulation which have come to the surface during the past six months of the session.

Is Regulation Changing?

It would be trite to say, in the light of criticism of the federal regulatory commissions such as has been going on in Washington, that the popular or even the congressional concepts of business regulation are changing. The fact is, of course, that they always have been changing, ever since the first general federal regulatory statute was enacted in 1887 setting up the Interstate Commerce Commission to regulate interstate railroad operations.

There is one organic law which has been changed by Congress at least 12 times, not counting minor revisions. At the outset, it simply regulated railroad service and discrimination, without any rate-making powers. Since then it has been strengthened and broadened until today there are those in Congress, considering the present-day plight of our railroads, who wonder whether they are not over-regulated, and whether we should not try an entirely different approach.

We could go much further back than that, to record our constantly changing concepts of regulating business in the public interest. From the time of Lord Hale—who over 300 years ago first laid down the distinction between those businesses "charged with a public interest" and other business—the laws of nations, including our own (at both the state and federal levels), reflect a variety of approaches. They range from the old colonial charter corporations, which were a veritable law to themselves, through the franchise, bargaining, and concession devices of the nineteenth century, down to the modern alternatives of constitutional or ministerial regulation, and socialistic public ownership.

These changes will probably go on. In our striving to serve the public interest, new laws will undoubtedly be passed, altering the powers and the statutory faces of our regulatory commissions and other administrative agencies. This we must expect if for no other reason than that change is a law of life. No-change is usually a symptom of death, or at least of a paralysis or lack of progress which we would not care to accept.

The important thing, however, for the lawmaker, as well as for the regulator, is to try to understand the underlying significance of the demand for change. Who makes such demands? And for what purpose? Not all change is progress, as we well know. There are bills pending in Congress today which, if enacted, would virtually abolish the commissions and turn regulation back a half century—back to where it was at the beginning of this century, when it was bogged down in a morass of legislative restrictions and ritualistic judicial procedures.

The Three Phases of Regulation

Most students of the subject are aware that regulation of public utilities over the past six or seven decades has moved progressively through all three branches of our constitutional government. Before the turn of the century, or at least before the U. S. Supreme Court decision in Smyth *v.* Ames in 1898, regulation was largely a creature of direct legislation. That very case involved an attempt by the state of Nebraska to fix railroad passenger rates at so much a mile. Later on, the New York legislature attempted to fix gas rates on the basis of a dollar a thousand cubic feet which was subsequently invalidated.

Ironically it was the Smyth *v.* Ames decision, even while ostensibly upholding the Nebraska statute, which really knocked statutory regulation into a cocked hat. It did this simply by laying down such exacting standards for testing the reasonableness or constitutionality of rate fixing that it was quickly recognized that no legislature, meeting a few months every one or two years, could ever cope with the over-all job of regulating utilities. In short, the court made it clear in 1898 that regulation was a full-time job and, on exacting business, required specialized knowledge and procedures.

After that time, and virtually up to the forties, regulation even though administered mainly by commissions, passed under the close-reined domina-

tion of the judiciary. During this period the courts in their zeal to see that the standards of Smyth *v.* Ames were applied, became almost a bunch of backseat drivers breathing down the necks of the regulatory commissions.

The third phase, the administrative phase, was ushered in with a series of rate cases which began with the Los Angeles Gas & Electric case in 1933, through the Natural Gas Pipeline decision of 1940, and culminating with the Hope Natural Gas Case in 1944.

During that period the courts began to back away from the role of case-by-case supervision of regulatory performance by the commissions. And, in the Hope case, the U. S. Supreme Court virtually wiped its hands of the whole business of judicial interference with methods, as distinguished from "end results." Since that time the commissions have been, to a large extent, the masters of their own house of regulation, subject only to very clear-cut statutory or constitutional limitations where they exist.

Has Evolution Been Good?

Now, has this evolution of regulation as the primary responsibility of, first, the legislators, then the courts, then the administrative tribunals been a good thing? This writer thinks that it has, and that a case could be made to justify every step of the way from statutory rate making to administrative supremacy.

If we examine the changing conditions, it could be fairly argued that each phase was logical and necessary. First, that the legal concept of regulation should be established by law; secondly, that its limitations or scope should be spelled out by judicial interpretation; and, finally, that a period of administrative "expertise," which was obviously nonexistent in the early years, should emerge by trial and error and experience to take over the responsibility of an increasingly complex and difficult duty of public service.

And this is so notwithstanding the fact that, in the process, the standards and measures of rate making have changed and shifted here and there from value to cost and even in some states back towards value again. This is so even though the ground rules of procedure have been greatly changed, and it is possible to show a present-day line of decisions at variance if not diametrical to the well-settled precedent of years gone by.

Why Does Regulation Change?

But we would miss the real meaning of this evolution if we looked no further than the law and case decisions. These developments were not accidental. Although flowing in a special area, they were still part of the main stream of economic thought in the United States and elsewhere. The nineteenth century was characterized by a certain amount of Utopian idealism—the idea that man could work out his own salvation on this earth by his own activity.

Such great reform legislation as the Granger movement, the Sherman Anti-Trust Act, and various other regulatory statutes for business and economic controls reflected this hopeful expectation that our political machinery could be adjusted and kept in balance by legislative fiat. In European countries this ground swell went much further in the direction of social controls, later put into effect by the British Labor Party and the Socialist parties on the continent.

But after two world wars and a depression and continued international tensions, we know now that there are many problems that cannot be solved, either by passing a law or abstract planning. Here, in the United States our utopianism has given way to the pragmatic approach, trial and error, "see if it works." We have come to rely upon a combination of business enterprise plus government regulation. And if the proof of the pudding is in the eating, this has worked remarkably well.

We need not repeat here the familiar recital of the great American success story in this field of public utility operation. Suffice it to say that under this system of encouraging private enterprise, subject to the restraint of constitutional regulation, there has developed our great public service industries. They have brought essential services to the everyday use of a greater proportion of the masses and in greater quality and quantity than any other system followed anywhere else in the world today.

But it would be oversimplification to suggest that we have found the only answer, or that all we have to do is to go on following the same formula to get satisfactory results. Such an assumption would be at war with what was said a moment ago about the inevitability of change. We live in a

(Continued on page 45)

Recent Quotations of Independent Telephone Stocks

	6/30/60 BID	6/30/60 ASKED	6/1/60 BID	6/1/60 ASKED	Current Indicated Dividend Rate
Anglo-Canadian Tel. Co.	39	39¾	39½	40¼	$1.20
British Columbia Tel. Co.	44¼	44¾	44½	45	2.20
California Interstate Tel. Co.	13	13½	12¾	13¼	.70
California Pacific Utilities Co.	19¾	20½	19¾	20½	.90
California Water & Tel. Co.	29¼	29¾	28	28⅝	1.36
Carolina Tel. & Tel. Co.	38½	40	38	40	1.60
Central Tel. Co.	21½	22	21	21½	.88
Chenango & Unadilla Tel. Corp.	26	28	26	27½	1.35
Cincinnati & Sub. Bell Tel. Co.	90	91	91	92	4.50
Citizens Utilities Co. "A"	16¼	16⅞	14⅛	14½	Stock div.
Citizens Utilities Co. "B"	16	16¾	13⅜	14	.52½
Commonwealth Tel. Co.	20½	21¼	20½	21¼	.90
Florida Tel. Corp. Class A	27	27¾	28½	29¼	1.00
General Tel. & Elec. Common	30⅛	Close	32¼	Close	.76
Hawaiian Tel. Co.	21⅛	21⅝	21⅞	22⅜	1.00
Indiana Tel. Corp.	23	26	23	26	—
[1]Inter-County Tel. & Tel. Co.	[1]27½	29½	70	75	.72 + Stk.
Inter-Mountain Tel. Co.	15½	16	15¾	16¼	.80
Jamestown Tel. Corp.	85	Bid	85	Bid	5.60
Lincoln Tel. & Tel. Co.	63½	Bid	63½	Bid	2.60
Lorain Tel. Corp.	33	Bid	33	Bid	1.40
[2]Middle States Tel. Co. of Illinois.	[2]20	21½	30	31	.80
North Carolina Tel. Co.	1	1⅛	1/16	1⅛	—
Northern Ohio Tel. Co.	54	56	53	55	1.60
Peoples Tel. Co.	92	Bid	92	Bid	4.00
Pioneer Tel. Co.	36	38	36	38	2.50
Rochester Tel. Co.	24	Close	24⅛	Close	1.00
Southeastern Tel. Co.	22	22¾	21¾	22¼	.90
Southern Nevada Tel. Co.	24½	25½	22½	23½	1.00
Southern New England Tel. Co.	44⅛	44⅝	43¼	43¾	2.20
Southwestern States Tel. Co.	23¾	24¼	23½	23⅞	1.20
[3]Tel. Service Co. of Ohio Class A.	[3]28½	31	175	Bid	Not announced yet
Tidewater Tel. Co.	25	27	25	27	1.40
United Utilities, Inc.	39¾	40½	39½	40	1.40
West Coast Tel. Co.	25½	26	24¾	25¼	1.20
Western Light & Tel. Co., Inc.	44¼	45	43½	44½	2.00
Western Utility Corp.	7½	7⅞	7⅝	8⅛	.36

[1]after 3 for 1 split
[2]after 40 per cent stock dividend
[3]after 8 for 1 split

(Quotations supplied by Merrill Lynch, Pierce, Fenner & Smith)

The PBX Customer . . . a Good-will Ambassador

By GILBERT R. BRACKETT

WE HAVE dwelled at length upon the Service Adviser and her responsibilities to her PBX customers. We have often spoken of how she must be resourceful and tactful when dealing with her PBX people if she is to maintain a friendly relationship with them.

We have also called to the reader's attention the importance of PBX service and its close connection to the indices of our own central offices. One can readily understand this affinity of PBX and central office services if we but realize that the greater portion of all traffic in most any city is generated by the PBX customer and this goes for toll as well as local service. The conduct of our PBX friends in using the telephone, therefore, can and often does play a major role in the grade of service given by our central offices.

Work as a Team

Commercial contact men, plant installers and repairmen and our Service Advisers, all work as a compact team toward the common goal that brings about amicable relations between our company and the PBX subscriber. Here the telephone company and the PBX customer meet on common ground and thrash out problems and difficulties that pester them.

The Service Adviser holds occasional meetings, inviting PBX attendants and, in some cases, PBX management folks to attend. Around the conference table every angle of PBX service is discussed and answers are found to questions that have hindered a mutual understanding of service problems. Such meetings have proved their worth many times over and have been the means of cementing a cordial relationship between the PBX customer and the telephone company.

Much money has been expended on brochures and literature of all sorts which have been written, published and found useful in bringing about an understanding of the need for telephone sanity in the PBX field.

PBX Management Backing

Many "frequently called out-of-town number directories" have been issued to the PBX customer to assist him in speeding up his toll service. In many instances, keyboard and swing files have been installed on larger PBX boards to accomplish the same purpose. Although the telephone company has not attempted to maintain such informational records, they have usually furnished the files and compiled the original records.

Many words have been expended to emphasize the importance of having PBX management backing as an assurance toward the success of a service improvement program. Generally, we have found these people, from top executives to craft folks, both cooperative and helpful and we are happy to know that, through our assistance, these PBX friends give a service that is pleasing to their customers.

Acquainting Management

Promotional plans of all sorts have been tried and found helpful in discovering the answer to most of the service problems that have origin at a PBX. Methodically we have plugged away at each and every obstacle that has attempted to frustrate our plans to give the PBX subscriber the best service at the least cost to him, and, in general, we have succeeded.

Our PBX customer—the attendants, the extension users and the management—have grown to know and respect the telephone company's field personnel who visit them often and help solve their telephone difficulties. But I often wonder just how seriously these same field people have worked in acquainting telephone company management with the important role our PBX customers play in affecting the service of the central offices.

Have meetings ever been held with our own people in the supervisory bracket for a discussion about the important PBX customer? Are they fully aware that this subscriber is the backbone of our industry, contributing the largest revenue and controlling the greatest volume of traffic that flows through our facilities, both local and toll? Are our management and supervisory people cognizant of the good they, themselves, could do at times to further the already fine reputation we enjoy with PBX customers?

Speeds Toll Service

I know of many service supervisors who invite the chief operators of toll and local offices to accompany them on visits to some of the more busy PBX installations. I have seen central office service assistants spend a day or two in the field with a Service Adviser, visiting PBX people with whom they talk every day, but have never had the pleasure of meeting. Service Advisers have brought PBX attendants to the telephone company operating rooms to meet the chief operator and all service assistants, later eating lunch with them in the company cafeteria, and then discussing their problems as they linger over a second cup of coffee.

Such activities have cemented an already good friendship. In many cases, they have cleared up little differences which could have snowballed into real problems. Through such media, our

central office folks have grown to know personally the people they most often meet by telephone. Such contacts have made our work more pleasant and have helped to speed up toll service, and this has saved toll circuit time which means a saving of money to the telephone company.

With all these activities, which have accomplished such wonders with our PBX associates, there is still a question which keeps bothering me. Have we reached the top level of supervision in our own company? In all our propaganda on training and contacting the PBX subscriber, we have stressed the importance of getting the cooperation of PBX management, if programs for service improvement are to succeed. But what have we done to acquaint our own management people with the importance of the PBX customer? Are they sold on the expenses that are incurred in making PBX contacts? Are they aware of the versatility, knowledge and dependability of the PBX contact people? Have they interested themselves in the programs and everyday hard work which has produced the enviable reputation we now enjoy in all levels of supervision and craft at the PBX customer's place of business?

Knowing Contact People

The answer to most of these questions is probably a qualified yes. Indexes and news letters keep our management people informed of the kind of service that emanates from the PBX customers as a whole. Other data gives them a quick picture of what PBX contact work is costing. In talking with business men at noon luncheons, and at other meeting places, they learn of the respect held for our company by such customers.

But does top management know personally the men and women of the traffic, commercial and plant departments, the contact people—those individuals who work daily with the PBX customer and are the backbone of all programs and educational activities which have produced such approbation by dint of hard work, common sense and astute handling of delicate situations? Have these same contact people made an attempt to know their own company management folks? Supervisory personnel are busy people. The higher they are up the ladder, the less time they may have for personal preferences, and yet they should know the people who are responsible for the supervision of the subscriber who is our best customer.

Telephone company management can do a great deal to assist in firming up PBX customer cooperation. Often they can secure an answer to a problem that calls for prestige and the authority of management. They have entrance to offices that are closed to one of less authoritative standing. Through their activities in civic and social organizations they have knowledge of what should be done to find the answer to a particularly knotty problem that seems to have no answer. Today, business moves at a great pace; our quandaries grow day by day. If we are to keep up with the many demands placed upon every phase of our work we must use our potentialities to the utmost.

Actual Case Cited

To illustrate the way in which telephone management can help solve conditions that are hurting the service of both the PBX subscriber and the telephone company, I would like to tell of an incident that happened several years ago.

A particularly bad situation existed at a certain PBX installation. A service improvement program had been in operation for some time with hardly any signs of advancement. Both attendants and extension users had the idea that so long as they were not employed by the telephone company they did not have to abide by any rule or suggestion offered by the company. All attempts to sell them on the fact that their telephone service, their profits, and their customer relations were closely related made slow progress. The PBX management people had little knowledge of what service overtones meant or how they could affect their business. Their attitude, while not antagonistic, was not helpful.

We were stymied. As a final resort we discussed the situation with the general manager of our company. He listened attentively to the problems we presented and as we concluded our report he said:

"I know that company well. I am personally acquainted with most of the management people. I feel certain they are not fully aware of their employes' careless practices and how they are affecting their customer relations and the service in our central offices. Please leave this problem with me. I am sure some improvement can be made."

Meeting Solves Problem

A week later, we were invited to meet with the president of the firm and his supervisory staff. Under the watchful eye of the president we talked to these people. We explained that we were not there to find fault or to tell them how to run their business, but merely to assist them in every way possible to overcome some of the questionable telephone habits they were using which could influence the customers who called them over the telephone, and affect the public relations of their company. We then approached the service irregularities that were causing them difficulties.

The results from this meeting were outstanding. Service improved at once. The management of the company began to receive compliments regarding the courteous way and the speed with which telephone orders for products of the company were expedited.

From that time on this particular firm became our most staunch supporter of the service overtones we had introduced. But the result we liked best was the smooth way in which the whole program had been accomplished. There was no resentment shown by any employe in the firm. In fact, the PBX attendants and extension users were as sincere as the management in revitalizing and increasing the efficiency of their service.

PBX Meetings Forgotten

I am not being critical of telephone company management. They are extremely busy people and have little time for minor troubles that confront our industry. They are harassed by a multitude of intricate problems that they alone can solve. They must depend upon those under their supervision for the groundwork that is so essential to a smooth running business. Certainly, they do not have the time to devote their attention to every seemingly critical problem that arises. Even so, should we expect our PBX customers to adhere to a practice we do not follow ourselves?

Meetings are held in every department at which all levels of supervision attend. Public relations are stressed at these conferences as well as employe relations, service indices and the costs of doing business. But seldom is a meeting called for the primary reason of discussing the PBX customer who is responsible for the greater share of our revenue and who creates the largest share of our service problems.

Why is this? Candidly, I do not know. PBX attendants and management people are invited to meetings for discussions of their telephone problems, and usually there is nearly 100 per cent attendance. Generally, such meetings are conducted by Service Advisers. The guests are assembled around a conference table and invited to bring up any problem or condition that is bothering them or their telephone service.

Questions Need Answering

Often questions arise that involve telephone company practices or policies, questions that cannot be answered by

(Continued on page 47)

THE Plant Man's Notebook

BY RAY BLAIN, TECHNICAL EDITORIAL DIRECTOR

ANY OPERATING COMPANY which is of the opinion that the upgrading of service offers only a long-haul return might be interested in a recent case providing immediate benefits.

An ilmenite mine started to produce some distance from a small town in Virginia. The local telephone company had a multi-party line running past the mine. The mine operators, however, were specific about the grade of telephone service they required—"a private line for everyone."

The manager carefully checked all conditions and made a shrewd decision. In the use of subscriber carrier, which cost considerably less than what would be required for the construction of physical lines, he found his answer. If the mine should cease operation, the carrier unit can be moved and used in another growth area. The telephone company now collects revenue from several private lines to the mine with extra mileage charges.

The careful planning of this manager converted a bothersome situation into an immediate money maker.

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In the early days of telephony, a lineman took great pride in his gloves. Next to his pliers they were his most prized possession. Many were the arguments among linemen as to which brand was the best. Some argued for red leather while others preferred the natural leather variety.

The writer has always preferred to wear a lineman's gauntlet type glove when working around the yard and garden. For years, we have ordered two pairs each year from a New England company. This year, our order was returned with the statement that the company was going out of business. We finally located the required gloves from another source. But we wonder what the present-day lineman is using for gloves. Perhaps, he is not as particular as the old-timers and just wears any type that he can find in the corner hardware or clothing store.

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There was a time when the idea of an all-electronic central office switching system was classed as the bluest of blue-sky thinking. Now, however, since a complete working system has been designed, built, tested and delivered to the military, operating telephone companies are eagerly seeking information on this new switching concept.

None of these companies plans to install an electronic switching system in the near future, but planners who think in terms of tomorrow realize that they must give serious consideration to this system.

Also of interest to planners for the future are telephone instruments using push buttons instead of the rotary dial, which has also been delivered to the military. This is the first instance to come to our notice of voice frequency signalling from a subscriber's station.

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The Pacific Telephone & Telegraph Co. has installed telephones in patients' rooms in the Grossmont Hospital in La Mesa, Calif.

Patients are permitted to dial their own calls within the local service area. Color telephones are extensively used. A blue telephone in the maternity ward signifies a baby boy, a pink one a girl.

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Adding to the problems of many operating companies these days is the changing order in many residential sections of our towns and cities. Homes of 20 to 30 rooms with spacious grounds once occupied entire streets in many of these areas. In these days of scarce domestic help and higher taxes, the trend is to tear down the mansions of the past and build large apartment houses in their stead.

As a result of this changing scene, there may now be a requirement for several hundred lines to serve an area that was formerly served by two to five lines. The increase plays havoc with cable distribution systems and often entire exchange areas. This, though, is one of the penalties of progress.

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Operating companies with several exchanges have indicated a need for an efficient means to feed billing information and other types of data to a centralized headquarters. Available equipment has been either too slow or too expensive.

In order to overcome these objections, engineers took a new approach and drastically reduced costs by designing the link on a common equipment basis and increased speed to over 400 bits per second so that this method could be practical. Up to 15 tributaries can be tapped off before it is necessary to add another channel, placing the system, in its most economical form, well within the exchange total of the average Independent company. This new data link is now on the market and available for immediate use.

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In Washington, D.C., the other afternoon, we received a call from our longtime friend, Col. Alton O. McLane, retired, from Anchorage, Alaska. The circuit was excellent and, with this type of communication, and air travel today, the 49th state need no longer be considered isolated.

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There are always more things to admire in men than to despise.

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Crosstalk: Man is described as that irrational creature who is always looking for a home atmosphere in a hotel, and hotel service around the house.

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Crosstalk: another thing more blessed to give than receive is advice.

Annual Review of

NEW PRODUCTS AND TECHNIQUES

By RAY BLAIN

THIS IS the fifth article in a series describing various new items of equipment and their application in telephony. Part 4 appeared in the July 2 issue.

Readers desiring additional information on any of the products described should write the manufacturer or TELEPHONY.

* * * *

Power Package. (Fig. 67). A unit designed to power all the hydraulic equipment needed on a utility construction body has been made an integral part of the new Uni-Power Body now being manufactured by Holan Corp.

Holan builds the body, power plant and all hydraulic equipment as a unit. The complete unit is then bolted to the chassis.

The "power package" consists of a 56 h.p. Wisconsin four-cylinder air-cooled engine, a Braden Model CL hydraulic winch and a tandem hydraulic pump with 50-gallon oil reservoir. This package powers the hydraulic derrick, winch, digger and supporting jacks.

The compact power unit—located just behind the crew compartment in the bed of the body—can be lifted out as a unit or by component parts for repair or replacement without removing the body. All hydraulic piping is done under the floor of the body and clear of the chassis.

When the chassis is at the Holan plant, a Uni-Power Body can be mounted in a matter of hours. Or the new bodies can be delivered in trailer loads to the customer's garage, completely painted and ready for rapid mounting to chassis. A Uni-Power Body can be carried as a "spare" and

Fig. 67. Power package.

placed on a chassis in two or three hours, thus eliminating tie-ups of expensive crews.

In addition to body mounting or change-over, the Uni-Power Body offers many other advantages. According to Holan, gasoline used in the stationary power plant is free of road tax. Engine idling, with resulting wear and tear on the truck engine, is eliminated. Down time for maintenance is drastically reduced because truck and body are independent units and are serviced as such.

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Multiple Reel Trailer. (Fig. 68). One man can load two cable reels and be on his way in three minutes with a Holan Multiple Reel Trailer, the company states.

Holan offers a complete line of one, two, three, and four-reel trailers, all incorporating the same design features that assure safe, fast, economical operation by one man. Pickup arms lowered to within 12 inches of the ground, handle reels as small as 24 inches and as large as 54 inches without any special attachments and without any heavy lifting by the operator.

A pushbutton controlled electric winch or hand winch lifts the reel into place. Both are located away from the hoisting mechanism, thus assuring that the operator stands clear of the reel while loading and unloading.

The electric winch is designed to prevent overloading of the lifting cable, even if the operator continues to apply power after the lift arms have reached maximum height. Reels roll freely to forward positions on spindle bars of sufficient length to support them in the event careless handling should cause

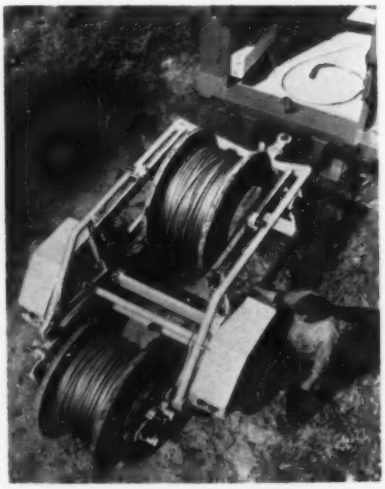

Fig. 68. Multiple reel trailer.

the reels to shift from side to side or out of square.

Exclusive 22-inch electric disc brakes eliminate overspin, give positive braking action, and provide tension for reconductoring.

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Truckster. (Fig. 69). Use of the Cushman 780 Truckster, a light but rugged three-wheeled vehicle, is on a rapid increase in the telephone industry.

A number of operating companies have added Trucksters to their fleets within the last three years. They are being extensively used for installation and maintenance work; for outside booth collection and maintenance service; as a teletypewriter repair service vehicle, and for warehousing.

Fig. 69. The Cushman truckster.

The 780 Truckster is powered by a Cushman Husky 7.95 HP, four-cycle engine and is capable of carrying an 800-pound payload. The drive train consists of an automotive style transmission, clutch, and differential.

Advantages claimed for the Truckster are low original cost; low operating cost (less than a penny per mile); and savings it makes possible on upkeep and maintenance, taxes and insurance. Other advantages claimed include maneuverability and versatility.

A number of major improvements have been made in the 780 Truckster for 1960, including a heavier formed channel, automotive style chassis; a bigger pick-up box with greater cubage capacity; a wide front shield for driver protection; top-hinged clutch and brake pedals, and a rubber engine mounting. An optional Fiberglas and steel cab has been improved with a full-vision, wrap-around windshield.

Other features include constant mesh transmission; hydraulic internal expanding brakes on all three wheels; independently operated parking brakes; heavy duty, automotive style wheel rims; and a sealed beam headlight.

The 780 Truckster is offered in two basic models—as a bare chassis or equipped with pick-up box—with either a manual (kick) starter or electric starter. A wide range of body accessories to fit the job is available, including a Fiberglas cover for the pick-up box; a personnel carrier seat; a flat bed with stake racks; a dump box, and refrigerated box.

Cushman Motors also produces three other three-wheeled machines, electric powered, for commercial and industrial application. They are (1) Electric Truckster, capable of carrying a half-ton payload plus operator and passenger, with a range of up to 50 miles on a charge; (2) two-passenger Industrial Electric with a quarter-ton payload rating, and (3) one-passenger Industrial Electric with a two cubic foot carrier space. The two Industrial Electrics will travel up to 40 miles on a charge, and are particularly suited for in-plant applications.

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Electronic Shelter. (Fig. 70). York-Hoover Corp. is diversifying its product lines with the addition of a line of lightweight field and mobile shelters designed for transport by cargo truck, fixed or rotary-winged aircraft, rail, ship and landing craft.

In making this announcement, York-Hoover pointed out that the firm pioneered the design and manufacture of thousands of shelters and vans for the armed forces since 1939. It designed and built the first mobile units housing electronic equipment and later the first shelters developed to replace the mobile equipment.

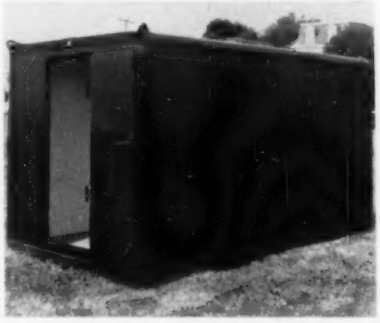

Fig. 70. Electronic shelter.

The S-141 shelter is used in missilry as a tracking center, in communications as a microwave center, in navigation as a GCA and ILS center, in the general electronics field as a maintenance shop, and in rapid air transit as a shipping container.

Other types of shelters are being developed using unique fabrication methods and focusing on lightweight construction for maximum mobility.

Diesel Micro Power Plant. (Fig. 71). A new 10-kilowatt Diesel engine micro power plant has been added to the micro power family by U. S. Motors Corp. The micro power is the continuous, uninterrupted, no-break power supply for microwave communication systems. Development of the Diesel engine drive has been carried on for the past four years, and production of the 10 kw model began in 1959. It will be followed shortly by a 15 kw unit.

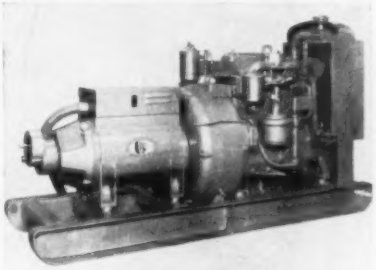

Fig. 71. Diesel micro power plant.

A 50 kw model has also been developed for use at the Bomarc Missile sites. While this model is basically the same as its smaller relatives, it contains several features required by this particular application.

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Mobile Power Unit. (Fig. 72). The U. S. Motors Corp.'s Versa-Trailer is available in three sizes, 15 kw, 25 kw, and 35 kw, three-phase 80 per cent PF, each with a corresponding single phase rating. Selection of the desired voltage is foolproof, as it is instantly made through a connection box with interchangeable covers, one cover for each voltage. The covers are attached to cables that terminate in plugs. Each plug is different—designed to fit only the proper receptacle. Three phase voltages are 240, three-wire, and 120/208 four-wire; single phase voltages are 120, or 240, 2-wire, and 120/240, 3-wire.

The equipment is mounted on a flat-bed, two-wheel trailer built for rugged, high-speed mobility. Trailer has fenders, parking jack, dead stand, safety

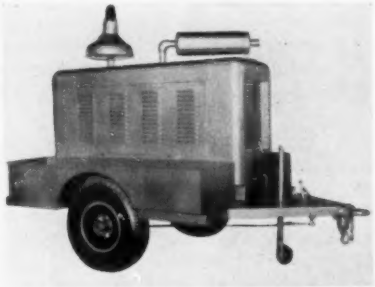

Fig. 72. The Versa-Trailer.

chains, stop and tail lights, directional lights, lunette hitch and fuel tank.

Combination warning flasher and flood light on extendible stand, and either electric or tension safety brakes are optional equipment on the trailer.

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Service Vehicle. (Fig. 73). This service vehicle for manhole work, a product of U. S. Motors Corp., includes an engine generator, rated 3500 watts, 115 volts, single phase, driven by a two cylinder, air-cooled engine for either LP gas or gasoline fuel. A pump of 240 GPM, at 20 foot head, 3 inch suction and discharge, is driven from the generator shaft extension through a remote controlled magnetic clutch. It may be used to dewater manholes, where necessary, before starting work. Starting and stopping from the manhole is possible through a cable and push button.

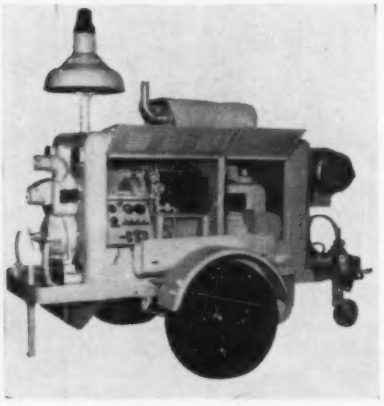

Fig. 73. Service vehicle.

Where needed, a 2.88 cubic foot air compressor, 100 p.s.i. is available as an accessory. It is driven by a V-belt from the generator shaft extension. An air receiver and air drier is provided so the compressed air can be used for pressurizing either power or telephone cables. The complete unit is trailer-mounted with a steel enclosure. Racks for LPG cylinders, or a gasoline tank are provided as are racks for the starting battery and water hose. Flood light and red warning light are mounted on an extendible support. Space is provided for a portable electric ventilating blower which can direct heated air from the engine into the manhole.

•

AC-DC Motor Driven Blower. (Fig. 74). This new, light-weight, universal ac-dc motor driven ventilating blower and smoke ejector is now made available by U. S. Motors Corp. It is intended for use with the improved portable engine generator to provide ventilation for manhole work at the same time that the engine generator is supplying either 115 volts ac or 120 volts dc for lights and tools. A variation of the blower is driven by a LP gas engine which makes it a completely self-contained ventilating or smoke ejecting unit.

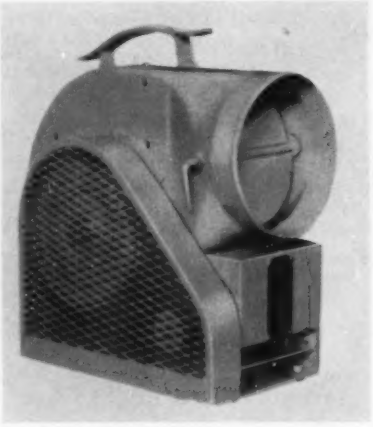

Fig. 74. AC-DC motor driven blower.

The air volume can be varied by an adjustable damper, and, because of its light weight, it can be placed close to the point of use.

•

Portable Generating Set. (Fig. 75). This U. S. Motors portable generator is specially arranged with generator panel, residential exhaust silencer and protective cradle to meet the specifications of the Bell System. The panel is equipped with two duplex grounded receptacles, voltmeter and pilot light. The engine may be furnished for the use of either gasoline or LP gas.

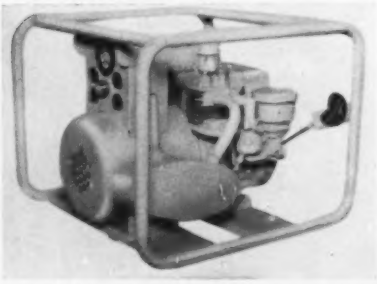

Fig. 75. Portable generating set.

This generator can be provided to furnish either 115 volts ac or 120 volts dc for the operation of lights and tools. A standard portable generator set, 1500 watts capacity, 115 volts single phase, 60 cycle ac, with T-handle and standard outlet receptacles is also available.

•

Engine Driven Blower. (Fig. 76). Standard equipment for this U. S. Motors blower is a one cylinder, four-cycle air-cooled Briggs and Stratton engine. The generator panel on the 1250 and 1350-watt generators has voltmeter, pilot light and two duplex grounded receptacles.

The blower housing is aluminum and a sirocco type fan is used. The rated capacity is 300 to 800 CFM. The U type base is equipped with non-creep shock mounts on both generator and blower sets.

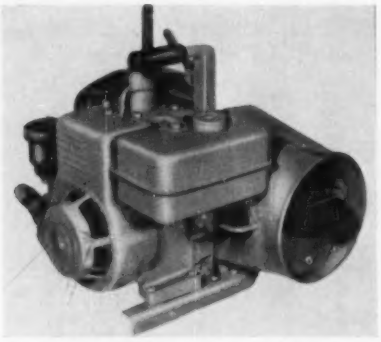

Fig. 76. Engine driven blower.

Optional equipment is a suction or discharge hose, 8 inch diameter, 15 feet long with a special flange for connection to blowers.

•

Scale. (Fig. 77). The W. C. Dillon Co. Inc. scale is accurate to within 2/10th of 1 per cent of the full scale reading. The mechanism is sensitive to weight changes of less than one-half of one division. Such precision assures that loads checked with this unit may be marked with both confidence and surety. The actual weight of all scales up to and including the 5000-pound model is only 42 pounds with hook and eye bolt. The 7,500 and 10,000 pound capacity scale weighs just 56 pounds. These scales may be easily carried by one man.

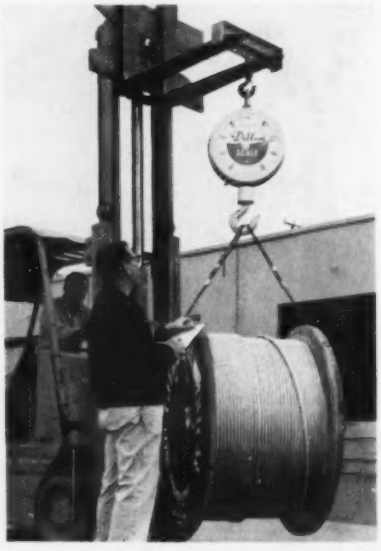

Fig. 77. Dillon scale.

The completely sealed 16-gauge steel case completely surrounds the scale mechanism. The points of closure are all covered with corrosion-resistant neoprene seals. Finished in bright baked enamel for high visibility and resistance to rust, the scale may be left coupled to cranes in outdoor locations without regard to rain, dust, sleet, or snow. Even the husky eye-bolt and swivel hook are extra heavily galvanized to withstand wear.

A twist of the wrist cancels out tare up to 20 per cent of the scale range in all capacities. Simply turn the large knurled thumbscrew counterclockwise in order to compensate for the weight of lifting slings, grab hooks, pallets, etc. No mental deductions are necessary to read the net weight.

Undoubtedly, this scale will adequately meet many needs of Independent telephone companies. Poles, for example, are usually too long to weigh on a conventional platform scale. Then, too, they are difficult to move about the yard. Weighing poles before shipment or moving out on the job is often necessary to prevent accidental overloading of trucks and saves highway fines. Often, also, a reel of cable may be weighed to determine the amount of cable that remains after a part has been used. This will save considerable time in unreeling and measuring, always a difficult task.

•

Spinning Wire Tightener. (Fig. 78). Often when terminating or cutting in a splice on aerial cable, slack forms in the lashing wire.

Rather than re-spin an entire span, it is possible to restore the correct spinning wire tension by the use of this tool, a product of Cable Spinning Equipment Co.

In use, the device is clamped to the strand and the end of the spinning wire inserted in the shaft. A screwdriver or similar object is placed in the shaft end and turned until the spinning wire is tight. A ratchet device keeps the tension from backing off. The messenger is then tapped with a hammer or a similar tool until more slack is induced. The process is repeated until the spinning wire has the proper tension for permanent termination. After termination, the spinning wire tightener is removed.

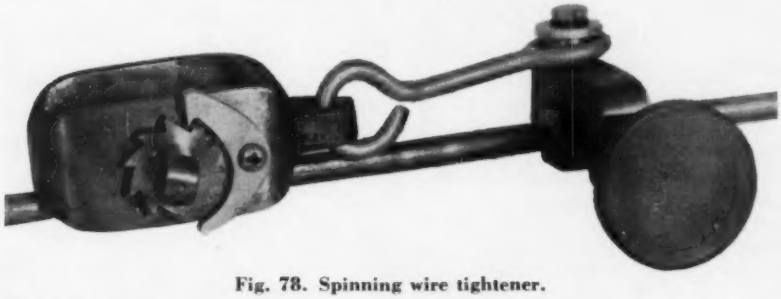

Fig. 78. Spinning wire tightener.

•

Dry Air Manifold. (Fig. 79). This manifold, by Cable Spinning Equipment Co., is designed for use in connecting cables to a dry air supply in systems where entire cable plants are to be maintained under pressure. These units may be used either in manholes or cable vaults and one or more can be coupled together.

Each individual cable supply outlet has its own needle valve to control the flow of air into the cable.

Each manifold has 12 outlets. Four lugs are provided for mounting. It is available in either aluminum or bronze.

•

Drive Ring Placer. (Fig. 80). This Cable Spinning tool proves useful when placing drive rings in hard-to-reach places. When used in a clear area, it insures against the ring being damaged by a misplaced hammer blow.

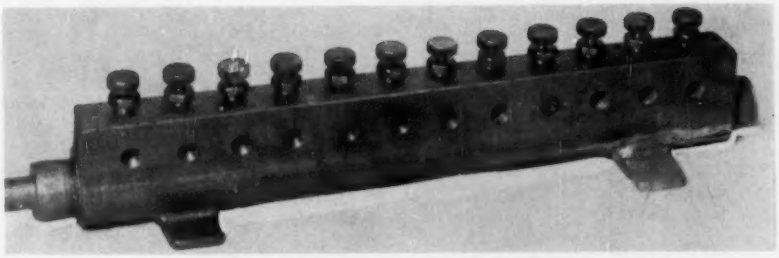

Fig. 79. Dry air manifold.

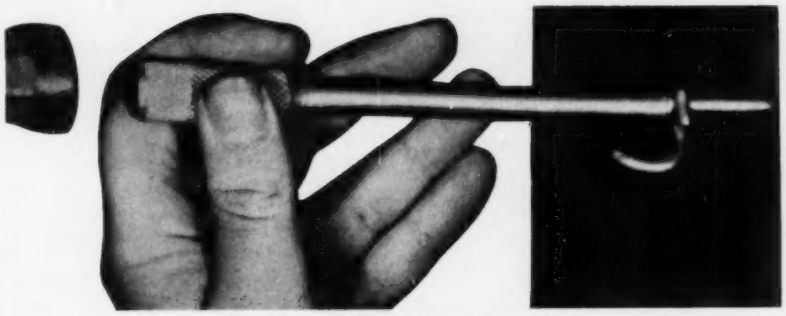

Fig. 80. Drive ring placer.

The hole for insertion of the drive ring is spring-loaded and firmly grips the ring so that the tool can be used at any angle.

•

Placing Ring Keeper. (Fig. 81). This ring keeper, also a product of Cable Spinning Equipment Co., is designed to maintain cable placing rings in order when not in use.

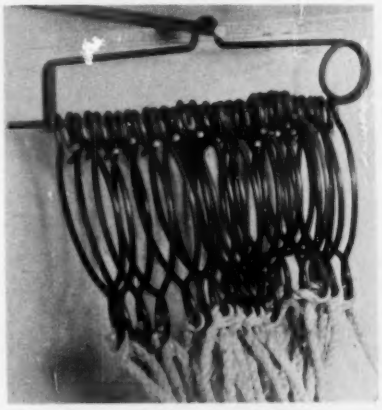

Fig. 81. Placing ring keeper.

When the rings are removed from the strand and placed on the keeper, they are always ready to use without the difficult job of untangling.

•

Tent Adapter. (Fig. 82). The Tent Adapter provides a means of readily securing a splicer's tent to the messenger strand. This device, by Cable Spinning, replaces the conventional clamp furnished with most splicer's tents. Designed especially for spun cable, it also

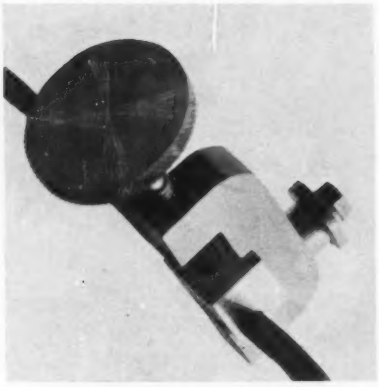

Fig. 82. Tent adapter.

proves useful on cable suspended by other means.

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Cable Trouble Breakdown Set. (Fig. 83). Cable Spinning designed this set to provide a safe breakdown circuit for paper-insulated cable. It makes use of twelve 45-volt "B" batteries connected in series, for a total of 540 volts.

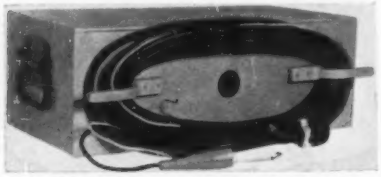


Fig. 83. Cable trouble breakdown set.

The batteries are contained in a strong cast aluminum case with carrying handles, plug outlet, bracket for cord, and 25 feet of cord, ready to use. The batteries may be changed with a minimum of effort.

•

New Precision Measuring Wheel. (Fig. 84). A new precision calibrated measuring wheel has been introduced by Rolatape, Inc., and is especially suited to line measuring and other purposes in the telephone industry. One man can accurately measure any distance at walking speed. The large wheel and wide neoprene tire provide positive traction for dependable measurements even over rough ground.

The new Rolatape Model 415 automatically records 100,000 feet without resetting; has disc wheel calibrated to one-half inch on one side and one-half of one-tenth foot on the other. The automatic brake prevents backtracking and a built-in stand holds the wheel upright during stops for data recording. Wheel diameter is 15½ inches; weight 9 lbs. The handle folds compactly for convenient carrying and storage. Zipper carrying case is also available.

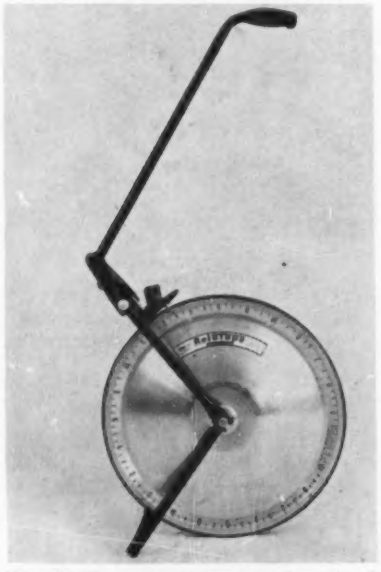


Fig. 84. New precision measuring wheel.

•

Portable Drafting Instrument. (Fig. 85). This device is a portable drafting instrument mounted on a light-weight drafting board. The instrument itself is fabricated from anodized quality aluminum construction with one piece aluminum scale. The calibration is scientifically engineered to retain its original accuracy.

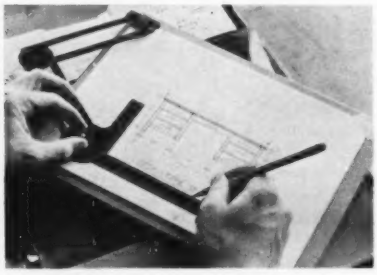


Fig. 85. Drafting board.

This device should prove extremely useful for field engineers. The drawing board measures 11 inches x 17 inches.

•

Bumper Jacks. (Fig. 86). A complete line of automotive jacks for shop and road service on trucks, buses and passenger cars has been added to its Simplex jack line by Templeton, Kenly & Co. The new line includes one model of single-saddle and two models of double-saddle bumper jacks equipped with the Saginaw Screw for easy lifting.

Another double-saddle model has a hydraulic jacking unit. Available, also, is an adjustable hydraulic bumper jack. All models have a rated capacity of 1½ tons and have a lift of 22¾ inches. Over-all heights range from 35 inches to 41 inches.

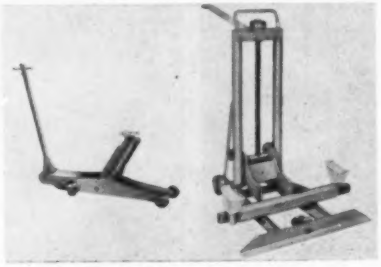


Fig. 86. Bumper jacks.

Two models of car props which can be attached to the double-saddle jacks, without bolting or using special tools, are also included in the line. These car props have a lift height of 22¾ inches and an extended height of 81 inches.

•

Heavy Duty Truck Jacks. (Fig. 87). These Templeton, Kenly hydraulic-pow-

(Continued on page 49)

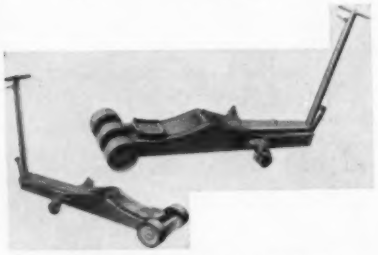


Fig. 87. Heavy duty truck jacks.

Fig. 88. Hydraulic cutter for power and communication cables.

McHenry is Honored at Missouri-Kansas Convention

By R. C. RENO

TELEPHONE men and women in Missouri and Kansas joined together to honor Foster B. McHenry, president of the United States Independent Telephone Association (USITA), at the recent joint convention of the Missouri Telephone Association and Kansas Telephone Association. The convention was held May 23 and 24 in Kansas City, Kan.

Mr. McHenry is also president of the Capital City Telephone Co. of Jefferson City, Mo. For many years he has been active in telephone industry affairs and has served the Missouri association as director and president.

Mr. McHenry also has served the USITA as an officer and director and as a member of several of its vital committees. He was elected president at the annual USITA convention last October.

The Missouri-Kansas meeting was attended by nearly 600 Independent and Bell company representatives from both states.

The convention was officially opened with the annual luncheon meeting of the Theodore Gary Chapter of the Independent Telephone Pioneer Association, with the chapter president, Berney Simner, presiding. Following the business meeting, the Pioneers and their guests were addressed by Don G. Mitchell of New York City, president of General Telephone & Electronics Corp. Mr. Mitchell was introduced by Wesley H. Loomis III, president of General Telephone Directory Co., and grandson of the late Theodore Gary, for whom the Pioneer chapter is named.

Mr. Mitchell spoke on the subject, "Communications—The Key to the future."

"The telephone business has been one of the greatest factors in our country's progress over the years and it will be an even greater factor in the years ahead," Mr. Mitchell said.

In meeting the challenge of providing dependable communications, so necessary to America's progress, he stated that the telephone business has gone through a revolution and has become a full-range communications business. He continued:

"The broader concept of communications that has come into being in the past few years did not spring from any single invention or new technique, but it has evolved from a multitude of things. Today, we look upon communications as the ability to get the *right* information to the *right* place at the *right* time. This has involved a more complicated technology and a wider range of techniques than any other major industry has experienced.

"The job confronting the telephone business has been to meet the demands for more telephone service by superimposing new needs on existing needs, new plant on existing plant, and making them work together without any disruption of service."

Foster B. McHenry, president of USITA and of the Capital City Telephone Co. of Jefferson City, Mo., addressing the joint convention of the Kansas and Missouri telephone associations.

As examples of these superimposed facilities, Mr. Mitchell cited carrier, coaxial cable and microwave radio.

He also stressed the present and future challenge facing the industry in providing circuits and facilities to effect the transmission of data processed by electronic computers, which are being adopted on an ever-widening scale by business and government organizations.

"Here again, somebody has to get the *right* information from the *right* place to the *point* where the computers and other equipment can work on it—and that is the job of communication companies," he said.

Mr. Mitchell also portrayed the big challenges facing the telephone industry in providing facilities for many future developments such as slow-scan video and space communications.

If telephone companies are to meet present and future challenges, they must be financially healthy, Mr. Mitchell declared. On this point, he continued:

"When you get right down to it, all of the developments we have been talking about are truly meaningful only to the extent that they reflect a financially healthy communications business. Technological progress, and the translation of that progress into new and improved service to the public, take enormous amounts of money—billions of dollars invested in new facilities and equip-

ment. Now, as far as I know, money still doesn't grow on trees. And so the way a telephone company attracts new capital is by earning a fair and adequate return on the capital already invested in the business. This enables the company to pay an adequate return to those who have invested their savings in the company, and it also means earning enough to set up a sound depreciation program to replace existing telephone plant as it wears out or becomes obsolete.

"All too many telephone companies these days are being hit from two directions. First, the rate bases they are allowed are too low, and second, the amount they are permitted to earn on that low rate base is also too low. It seems to me that all of us in the telephone business must keep hammering home the fact that a telephone company or any other company, regulated or nonregulated, must have adequate earnings if it is to keep on improving and broadening its service. This is the point to keep foremost in mind: Adequate earnings will, in the long run, enable a company to provide *better service* at a *lower price* than would otherwise be possible."

Mr. Mitchell told his listeners that everyone in the telephone business has a responsibility in seeing that the public understands the industry's earnings problem. He said:

"Each one of us has the prime responsibility for assuring that the public understands our earnings problem. . . . Certainly, this is no easy job. No one likes an increased cost, even if we assure him over and over again that the cost will be less in the long-run. But you can do a great deal toward minimizing misunderstandings, and you will be surprised at the support you will receive from the most unexpected places when you explain the situation.

"A regulated industry is no place to hide your light under a bushel basket. We have a public to serve, and we are dedicated to serving it. But we can't do it unless our needs are recognized and unless we are permitted to solve our problems.

"All of us say we're in the communications business, but that means far more than providing a good communications service. It means doing an equally good job of communicating our objectives, our problems, and our needs to the public, and to the representatives and servants of the public—the government.

"Just how well are we telephone people communicating with the public—what kind of an impression do we make in the minds of the people who, in the final analysis, are in the driver's seat? How many times do we find ourselves on the defensive, communicating only because we have been forced into it, only to find that the public is vitally interested in our story and welcomes what we say? How many times have we found that our so-called opposition isn't opposition at all, but simply are people just like us who don't know our story because we haven't told it to them—and by 'story' I don't mean slanted, self-serving information, but *facts*, objective facts that speak for themselves."

The importance of telephone companies taking steps to initiate marketing and sales programs was stressed in a stirring address by Ben Smith of St. Louis, general merchandising manager of Southwestern Bell Telephone Co.

Marketing is the key that will unlock sales profits for telephone companies in the years ahead, Mr. Smith declared.

If a company's prescription for increasing sales profits is based only on the determination to "sell, sell, sell and sell more," its sales program may be headed for unhealthy and unprofitable days, according to Mr. Smith.

Don G. Mitchell, president of General Telephone & Electronics Corp., principal speaker at the luncheon sponsored by Theodore Gary Chapter of Independent Telephone Pioneers Association.

Profitable selling is determined by how well we mesh, "what" we sell with "where," "when," "how," "why," and "to whom" we sell. Welding all these factors in sales plans is marketing, he said.

A profitable sales program, he stated, should be built around: (1) Selling service that will be retained, (2) selling service that does not have high move costs, and (3) selling items that have high salvage value.

"Less than 1 per cent of the average annual household expense now goes for communications, indicating customers can afford more telephone service," Mr. Smith observed.

People are on the move, too, he continued. In the relatively short period between 1950 and 1954, some 156 million people moved into new homes either across the street or across the nation. This mobility means there is a constant residence market for telephone service and it provides excellent contact possibilities with customers.

Household size, too, indicates a good market for additional telephone services, Mr. Smith pointed out. Department of Commerce figures show the average household has 2.22 bedrooms and 38.1 per cent of all households have three bedrooms or more. He continued:

"People buy extension telephones to save steps—to avoid walking up and down stairs or through a number of rooms to reach the telephone. Interviews with customers having extensions disclosed 42 per cent gave this as the reason they took the additional service. Another 16 per cent said additional tele-

Officers and directors of the Missouri Telephone Association. Front row, left to right: R. E. Williams of Oregon; H. Scott Gault of LaPlata; J. E. Bartruff of St. James; Katharine A. Bauer of Jefferson City; Elizabeth Journey of Higginsville, and C. W. Chastain of Princeton. Back row, left to right: R. W. Hedrick Jr. of Jefferson City; Foster B. McHenry, Jefferson City; J. G. Kreamer of Kansas City; P. A. Browne of Clarence; John Gault of Buffalo, and Clifford Davis, Sullivan.

phones were helpful during periods of illness and 15 per cent wanted their extensions because of the general convenience provided. Added privacy, security and special needs for night and business calls were other reasons these customers gave for having additional telephones in their homes.

"Yet, a survey of one-telephone homes shows 29 per cent have the telephone in the living room, 23 per cent in the dining room and 19 per cent in the hall or foyer. None of these are step-saving, convenient, or private locations.

"The constant market, size of households and present location of telephones in one-telephone homes, plus knowledge of the reasons people want additional telephones, all point up the sales potential in the residence market."

Equally important, additional residence service is profitable for the telephone company, Mr. Smith said. "The average life of a residence extension in my company is 8¼ years. It takes less inward movement to realize a gain with residence extensions. Because of moves and changes, we figure we must install 10 residence main stations, 5.8 business main telephones, and 4.1 business extensions to gain one telephone. Yet it requires only 2.2 residence extensions to make this gain."

Mr. Smith also offered these merchandising tips on selling additional residence service:

(1) Color telephones stimulate extension sales and they apparently have longer location life than black telephones.

(2) The kitchen is now the preferred telephone location in the home.

(3) More people overestimate the cost of additional telephones than underestimate it, indicating we should do a better price education job with customers.

(4) Homes with more than one telephone still are fertile fields for extension sales.

(5) Special equipment items such as illuminated dials and volume control sets can be marketed better than they are today.

The second straight line is also a promising money-maker in the residence market, Mr. Smith believes, as more families will have teen-age members over the next two decades. His company expects to have 1,940,000 teen-agers in 1,550,000 families in its territory by 1975. The number of others—such as mothers-in-law, uncles and cousins —living with families also increases the market potential for second straight lines.

Looking at the farm market, Mr. Smith admitted that present telephone usage appears to be rather low.

However, he quoted results from a survey of Midwestern farmers that shows 64 per cent usually have to be called to the telephone while the called party waits. Three out of 10 say this is inconvenient. Another 29 per cent say they usually have messages taken for them and 38 per cent have missed incoming calls because they were away from the house where the telephone is located.

According to this survey, 18 per cent of the farmers believe additional telephones in buildings other than the home would be useful. Reasons they gave were for convenience, saving time and steps and insuring they would receive calls.

Officers and directors of the Kansas Telephone Association. Standing, left to right: Hubert Froman of Edna; W. T. Gault of Gardner; George A. Hearne of Kansas City, Mo., and H. K. Culbertson of Sterling. Seated, left to right: John Hopkins of Topeka; Douglas Gleason of Ottawa; D. W. Wright of Hutchinson; Carroll Nelson of Lenora. Not pictured: Tom Fegan of Junction City; Dave McKay of La Crosse; Harry Miller of Great Bend; George Rooney of Belleville; Clifford Heidebrecht of Burrton, and J. E. Hoy, Topeka.

Ben Smith, general merchandising manager of Southwestern Bell Telephone Co., who addressed the Missouri-Kansas convention.

These farmers showed interest, too, in such equipment as: Signalling device (18 per cent), loudspeaker in the yard (17 per cent), and loudspeaker-microphone system (11 per cent).

Mr. Smith urged the convention to forget the old "horse and buggy" farm image. Today, 99 per cent of farm homes have mechanical refrigerators, 94 per cent have electric or gas stoves, 72 per cent have television sets, and 28 per cent have air-conditioning. Today's farmer is acclimated to modern living, Mr. Smith said. He also can be sold modern telephone service.

Other featured speakers of the convention were M. Graham Clark, president of The School of the Ozarks and the Rev. Roger L. Fredrikson, pastor of the First Baptist Church, Sioux Falls, S. D.

Dr. Clark stressed the necessity for all Americans to get along with their neighbors next door and the neighbors in other countries of the world.

Dr. Fredrikson pointed to the strong spiritual influence which has guided America since the nation was founded, and was illustrated most aptly in the conduct and expressions of our early leaders. He called for the courage and unity required to meet and overcome the threats to our way of life, and stated that such unity and courage could rise to the top only in a nation of people with faith in their God.

Following the convention, the Mis-

(Continued on page 49)

Courts and Commissions

President Proposes Detroit Man for FCC Vacancy

President Eisenhower has nominated Charles H. King of Detroit, Mich. to the Federal Communications Commission vacancy left by the resignation of the former chairman, John C. Doerfer.

Mr. King, dean of the Detroit University College of Law, will complete the unexpired seven-year term of Doerfer, who resigned following disclosure of his acceptance of yacht trips in Florida from a broadcasting executive.

The President previously had nominated Edward Mills Jr., Morristown, N. J., for the vacancy but his name was withdrawn at Mills' request.

Mr. King, 53, is a Republican and a resident of Grosse Point, Mich. He has been a law school dean for 16 years. He was Michigan manager for the late Senator Taft (R., O.) during the latter's GOP presidential bid in 1952.

On another FCC membership appointment, Commissioner Robert E. Lee has been confirmed for another term.

Arkansas Company to Appeal Delinquency Penalty Ruling

The Allied Telephone Co., Little Rock, has indicated it will appeal to Arkansas Circuit Court, a fine imposed on it by the Fordyce City Court for charging a penalty rate on overdue bills (TELEPHONY, Jan. 30).

Fordyce Mayor Thomas Wynne, acting as judge, fined the Allied company for violation of a December 1959 City Council resolution which had ordered the company to cease collecting a 10 per cent delinquency penalty on bills not paid by the fifth of the month.

The fine was $1.00 a day from Jan. 1, 1960 until June 17, 1960, and $2.00 a day after June 17, until compliance. Mayor Wynne suspended all costs in the case.

The Arkansas Public Service Commission on July 5 was to have heard the Little Rock company's appeal questioning the legality of the Fordyce council's resolution.

The Fordyce City Council on June 7 ordered the city attorney to issue a warrant for the arrest of Allied and to charge it with violation of the resolution.

Approve $5,500 Rate Increase For Utah Company

Emery County Farmers Union Telephone Association, Orangeville, has been granted an annual rate increase of $5,500 by the Utah Public Service Commission.

The association serves Castle Dale, Clawson, Cleveland, Elmo, Emery, Ferron, Huntington Canyon, Moore, Lawrence and Orangeville. The new rates were to be effective July 1.

The association is non-profit and member-owned.

Ore. Company Joins United System in Stock Exchange

United Utilities, Inc. has increased its operations in the Pacific Northwest with the acquisition of the Northwest Telephone Co., Redmond, C. A. Scupin, United's president, has announced (TELEPHONY, June 11).

Shareholders of the Northwest company will receive 26,843 shares of United Utilities common stock in an exchange for all the assets. The merger became effective July 1.

Northwest serves about 5,000 telephones through six exchanges in central Oregon. The exchanges at Redmond, Sheridan, Willamina, Culver, Grand Ronde and Sisters are all dial operated, employing completely modern equipment, Mr. Scupin said.

Northwest has total assets of $1,250,000. Revenues last year were $436,500. It will be part of the Oregon-Washington Telephone Co., a wholly-owned subsidiary of United, which had about 30,000 subscribers prior to the consolidation, which was approved by the Oregon Public Utility Commissioner on May 31. The United System presently serves about 480,000 subscribers in 15 states.

The Northwest company has been headed by James M. Wells, president. Mr. Wells succeeded his brother, Theodore J. Wells, upon retirement of the latter in 1954. Raymond M. Crockett was vice president and general manager.

James Wells will retire from active management to other business interests in Redding, Cal. Mr. Crockett will assume other managerial responsibilities with the United System. The remaining personnel will report to Earl R. Dean, president of the Oregon-Washington company.

Approve New Rate Schedule For New York Company

The New York Public Service Commission on June 29 accepted a tariff amendment filed by the Oswego County Telephone Corp., Fulton, to increase its rates, effective July 1. The company serves about 9,250 telephone stations through dial offices in Fulton and Phoenix.

In filing its new tariff, the company said its plant investment has increased by more than $500,000 during the past two years and that its operating expenses for the 12 months ending June 30, 1961 will exceed those of 1959 by about $92,000, largely due to wage increases. It is expected that the new rates will produce about $103,500 additional annual revenue.

In addition to its general increases, the company will raise its mileage charges for service outside its base rate area by an average of about 20 per cent.

Get Kan. Company's Request For Incorporation, Raise

The request of the Elkhart Telephone Co. to incorporate, and to increase its rates on dial cut-over was to have been heard by the Kansas Corporation Commission on June 28.

It is reported that since W. C. Whitecotton purchased the system in 1956, the number of telephones has grown from 500 to 700.

Neb. Stock Issue Request

The Nebraska Railway Commission on June 21 was to have heard an application of the United Telephone Co. of the West, Scottsbluff, for authority

to issue $200,000 of common stock to its parent company, United Utilities, Inc.

Establish Rates for New Exchange of Wis. Company

It has been reported by Robert H. Keating, manager of the Amberg Telephone & Telegraph Co., Wausaukee, Wis. that a schedule of new rates has been approved for subscribers acquired by the purchase of the Harmony Telephone Co. (TELEPHONY, Dec. 5, 1959).

The expected increase in annual revenue, based on the company's request, amounts to approximately $8,419.20.

The company now has five exchanges —Amberg, Crivitz, Goodman, Pembine, and Harmony, serving more than 1,300 subscribers.

Old and new rates affecting the Harmony exchange subscribers are shown as follows:

	Old	*New*
One-party business	$4.40	$9.50
Two-party business	4.40	8.15
Rural business	3.85	6.00
One-party residence	3.55	6.20
Two-party residence	3.40	5.10
Four-party residence	3.20	4.20
Rural residence	3.00	5.00

Ask to Sell in Wisconsin

The Wisconsin Public Service Commission on July 5 was to have heard the joint application of the Farmers Telephone Co. of Merrimac and Sumpter, Merrimac, to sell, and of the General Telephone Co. of Wisconsin, Madison, to purchase its property.

Speaks at N. Y. Graduation

William B. Harrison, president, Independent Telephone Corp., Dryden, N. Y., was a speaker recently at the commencement exercises of the State University of New York Agricultural & Technical Institute at Alfred. Mr. Harrison is chairman of the council of that institute and a former member of its faculty.

Obituary

EDWARD FLANNERY, 63, president and manager of the Canton Leroy Farmers Telephone Co., Canton, Pa., died on June 22.

Mr. Flannery joined the Canton Leroy company in 1922 and had been president and manager of the company for the past 12 years or more.

Survivors include his wife, Mary; daughters, Mrs. C. K. Reinhard and Miss Rita Flannery, both of Canton; two sisters, Mrs. Milton Dodge and Miss Catherine Flannery, of Laurelton, N. Y.; a brother, Martin of Jamaica, N. Y., and three grandchildren.

Members of Texas Chapter, Independent Telephone Pioneer Association after the Sunday devotional held at the Baker Hotel, Mineral Wells, on June 5. Standing, left to right: Jim Luther, Allen Urschell and son, Recie Eakin, Era Lowry, Wally Johnson, Mrs. Wally Johnson, G. D. Force, Mrs. G. D. Force, Mrs. Morris Bateman, Morris Bateman, Mrs. Marion Clay, F. A. Robinette, and Marion Clay, president, Texas Telephone Association. Seated, left to right: little Miss Urschell, Mrs. Allen Urschell, Lewis Gross, Howard Housley, program chairman, Mrs. Jim Luther, Mrs. Lewis Gross, Mrs. F. A. Robinette, Mrs. Howard Housley, Winnie B. Burnett. Also attending but not pictured, J. B. Haley, executive secretary of the Texas Telephone Association.

Texas Chapter ITPA Holds Business Meet, Devotional

A meeting of the Texas chapter of the Independent Telephone Pioneer Association was held at the Baker Hotel in Mineral Wells, Texas, on June 3, 4 and 5.

The business meeting and a board of directors meeting were held, with Morris Bateman, first vice president, presiding in the absence of the president.

Breakfasts were served at the poolside to those who were "sun-minded."

On Saturday evening, the adults enjoyed a banquet, and the teenagers held a "cook-out" beside the swimming pool.

Swimming, skiing, boating and golfing were enjoyed by some, but bridge was the favorite pastime.

Marion Clay, president of the Texas Telephone Association, and J. B. Haley, executive secretary of the Texas Telephone Association, were present.

The Sunday devotional was given by Winnie B. Burnett, and Marion Clay gave the benediction.

Ask Bond OK in New York

Rochester Telephone Corp. has asked the New York Public Service Commission for approval of the issuance and sale on Sept. 1 of a 12-million-dollar first mortgage bond issue maturing in 1993. Proceeds will be used to pay off bank loans incurred for construction and extension of facilities.

Expansion Plans for Pakistan

F. M. Khan, Pakistan's minister for communications, on June 12 announced that 50,000 to 60,000 telephones are planned for installation during the next five years. He said that 35,000 telephones were installed during the last five year period. He also revealed that a factory has been set up in Pakistan which is now manufacturing telephone and carrier equipment.

Nationwide Network Gives Doctors Drug Information

A national telephone network which provides physicians with essential pharmaceutical information has been established.

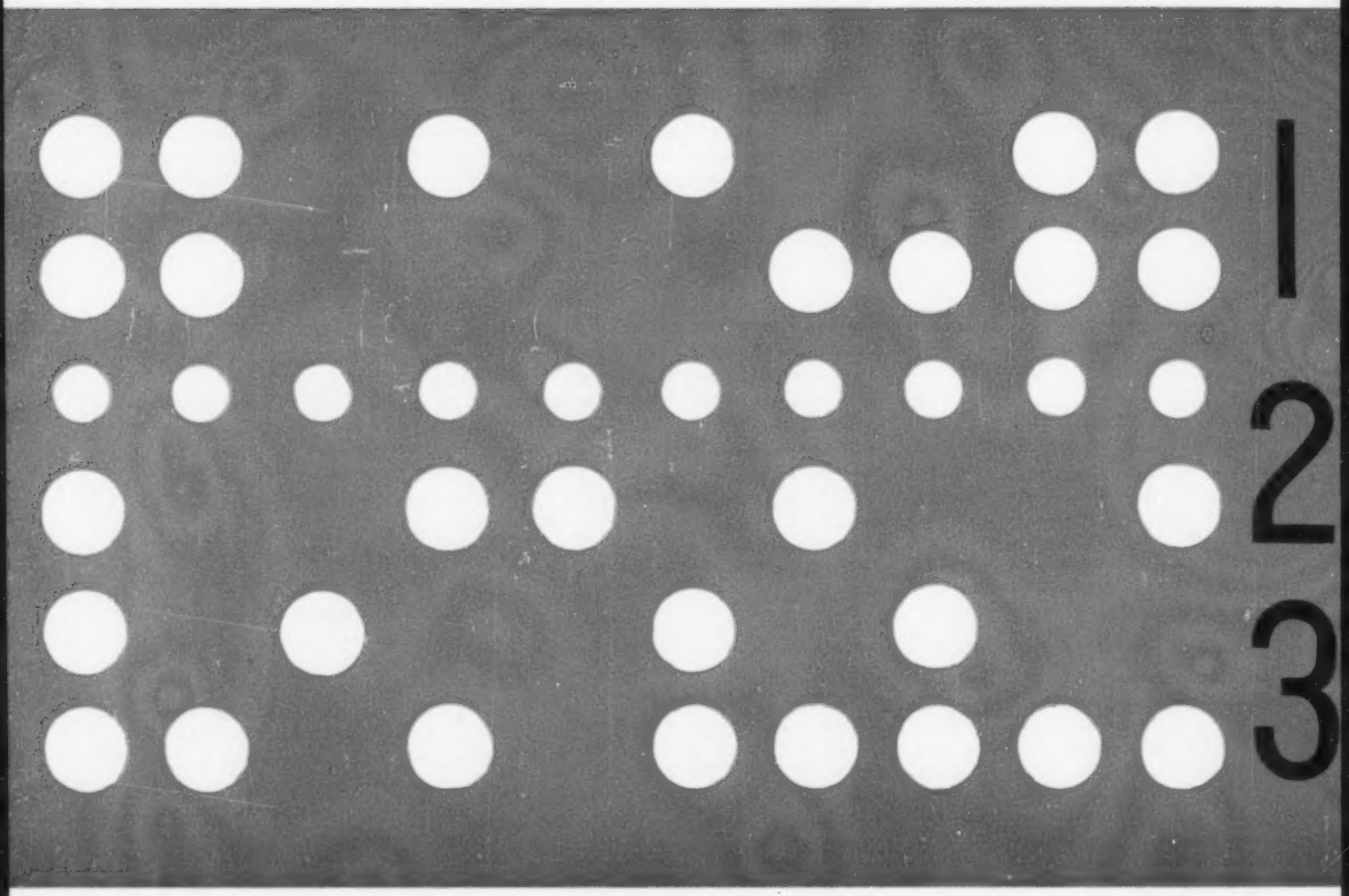
Called Mediphone, Inc., the new company makes available to doctors important data not available through normal channels.

Dr. Richard L. Meiling, associate dean of the Ohio State University School of Medicine and a board member of the firm, telling of the need for this service, recounted the case of a colleague in desperate need of information who had to wait from Friday night to Monday morning to reach the proper authorities at a major pharmaceutical concern.

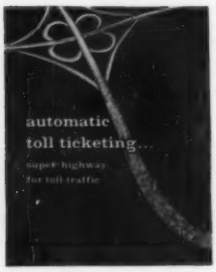
Another board member said, "We have felt a desperate need for faster reporting of side effects and toxicities as new drugs are put into use by the profession."

He also cited the fact that doctors on the West Coast have needed a service that would obtain information for them from the manufacturers, most of whom are located in the East and Middle West.

STROWGER AUTOMATIC GIVES YOU



WRITE FOR FREE BOOKLET ON AUTOMATIC TOLL TICKETING



Get the full facts on automatic toll ticketing. This new 8-page booklet explains how you can increase revenue and reduce operating costs with automatic toll ticketing. Explains in simple terms how toll ticketing equipment processes calls. Ask for Circular 1876-A. Write Automatic Electric Sales Corporation, Northlake, Illinois. Or call, Fillmore 5-7111. In Canada, Automatic Electric Sales (Canada) Ltd., 185 Bartley Drive, Toronto 16.

TOLL TICKETING
ALL 3 FEATURES

IDLE TICKETER IS ALWAYS READY TO HANDLE NEXT CALL!

With SATT, you get a maximum number of available trunks during peak-hour loads. Ticketer spills complete data for each call into pool equipment instantly upon completion of call. The ticketer is never choked by accumulated data!

THROWS OUT INCOMPLETE CALLS BEFORE TAPE IS MADE!

SATT never records incomplete calls. Only completed, billable calls are recorded on tape. This means your equipment is never tied-up recording incompleted call data.

CALL DATA CAN'T BE ERASED!

SATT gives you a permanent record of the call. Data for each completed call is quickly punched on tape. This tape can be checked, re-checked, run off repeatedly and retained to meet legal requirements.

AUTOMATIC ELECTRIC

Subsidiary of
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GENERAL SYSTEM

Subjects covered at a June 14 and 15 joint meeting of the USITA Engineering Committee and representatives of the American Telephone & Telegraph Co. included PBX in-and-out toll dialing, numbering plan area information bureaus, all number calling, numbering plan area codes, closed circuit television, engineering standards for terminal trunks, data-phone service and facilities and line switching, as well as other matters. The meeting's purpose was the coordination of engineering matters affecting the Independent industry and the Bell System. Shown in attendance are seated, left to right: R. K. Ghormley of Lincoln, Neb.; R. J. Loveland of San Francisco, Cal.; A. W. Pyrke of New York City; W. A. Stevens of AT&T; A. A. Wilson of Mattoon, Ill.; K. L. Lawson of Lincoln, Neb.; Frank Barnes Jr. of Rockhill, S. C.; Fred Kahn of Northlake, Ill.; I. B. Jackson of New York City and W. A. Pitbladdo of Rochester, N. Y. Standing, left to right are: A. C. Ocker, H. C. Althouse, J. Zehfuss Jr., Z. E. Barnes and R. J. Brady, all of AT&T and W. H. Todd of Bellevue, O.

Bell Labs Offer Science Films for College Level

Two new sound motion pictures for use in college science and engineering classes have just been produced by Bell Telephone Laboratories. The films, entitled "Memory Devices" and "Similarities in Wave Behavior," were prepared under the guidance of Bell Laboratories scientists and engineers, and are available on free loan through local Bell Telephone Co. offices.

"Memory Devices" (16mm, sound, color, 27 minutes) is a narration film which shows information storage devices used in modern computing machine memories and explains how binary information is stored in them.

Basic concepts and terms are explained and examples of mechanical, electromechanical, magnetic, electrostatic and photographic memories are described.

The following memory devices are shown: punched cards, punched tapes, relays, magnetic tapes, magnetic drums, ferrite cores, ferrite sheets, twistors, capacitor arrays, the Barrier Grid Storage Tube, and the Flying Spot Store.

"Similarities in Wave Behavior" (16mm, sound, black and white, 26½ minutes) is a demonstration-lecture by Dr. J. N. Shive of Bell Laboratories.

He discusses the similarities that exist in the behavior of waves in various mechanical, electrical, acoustical and optical wave systems. Using specially built torsion wave machines, he demonstrates the reflection of waves from free and clamped terminations.

The ideas of superposition, standing waves, and resonance are shown in slow motion. Energy lost by impedance mismatching is demonstrated and calculated in simple terms, and then Dr. Shive shows how quarter-wave and tapered-section matching transformers act to reduce energy loss.

These films are the seventh and eighth productions completed by Bell Laboratories' Educational Film Production Unit which was established three years ago primarily to make audio-visual aids to science education on the college and university level.

Other films in the series are:

"Brattain on Semiconductor Physics" (16mm, black and white, sound, 30 minutes).

"Crystals—An Introduction" (16mm, color, sound, 25 minutes).

"Submarine Cable System Development" (16mm, color, sound, 18 minutes).

"The Formation of Ferromagnetic Domains" (sound filmstrip, color, 132 frames, 45 minutes, narration on two 33⅓ rpm records).

"Zone Melting" (sound, filmstrip, color, 133 frames, 45 minutes, narration on two 33⅓ rpm records).

A two-record album entitled "The Science of Sound," containing demonstrations of acoustic phenomena has also been produced.

All audio-visual aids in this series are designed for classroom use and contain no advertising. They are available on free loan through local Bell Telephone Co. offices.

Missouri Pioneers Elect Officers

The Theodore Gary Chapter of the Independent Telephone Pioneers of America held their annual luncheon meeting on May 23 during the convention of the Kansas and Missouri Telephone Associations. Berney Simner presided.

The following officers and directors were elected: President, Harold C. Stouffer of Diamond; vice president, Jack E. Bartruff of St. James; secretary-treasurer, Katharine A. Bauer of Jefferson City; directors, Berney Simner of St. Louis; George Fitzgerald of Jefferson City; Verne Hix of Kansas City; Kathryn Journey of Higginsville and Wright King of Shelbina.

The chapter approved a motion to change the by-laws to include members residing in Kansas.

Canada's Telephone People Get Two-Way Look in Western Meet

THE FIFTIETH anniversary meeting of the Western (Can.) Counties Telephone Association, held on June 1 in London, Ont., was marked by the attendance of 200 telephone men.

Presiding at the meeting was A. H. Brown, of Byron, Ontario.

The tone of the meeting, as set forth by President Brown's slogan and message—"Forward for '60," was optimistic.

With both a look back and a look into the future, Mr. Brown said, "Your association has stood the trials and rigors of 50 years of telephony. We look forward to another very busy year within the association. The resolution committee brought in recommendations that we continue our efforts in plant schools, managers' and secretaries' schools, and the display at Western Fair. These I think are all very worthwhile efforts," though they take a lot of time and work.

The secretary-treasurer's report by H. J. Schmidt, of Baden, Ont., showed an improvement financially.

Western Counties members heard greetings from the Canadian Independent Telephone Association (CITA), brought by president Ross McEwing, of Drayton, Ont.; from the Southwestern Counties Independent Telephone Association; the Georgian Bay District Independent Telephone Association; and from the Eastern Ontario Independent Telephone Association.

Mr. Schmidt presented a report for the CITA committee on "Joint Pole Line Use with Ontario Hydro."

Following his report, the principal speaker of the convention, Keith Vogt, of St. Paul, secretary of the Minnesota Independent Telephone Association, spoke on "Today's Telephone Problems," a talk termed by Mr. Brown "outstanding and very timely."

The program was further sparked by a talk on "Telephone Safety" by Roy Bieth, manager of the Electrical Utilities Safety Association, who emphasized the point that safety is everybody's business.

The Bell Telephone Co. of Canada was represented at the meeting by H. Riddle, of Toronto who provided an intimate note with his projection into the future, in an address titled, "A Golden Anniversary Look—And What It means To Be Telephone People."

V. W. Flynn, chairman of the Ontario Telephone Service Commission, told his audience of the number of Independent telephone companies proposing to convert to dial service this year, another hopeful aspect.

The concluding address was given by James Thomson, of Buckingham, Quebec, speaking as chairman of the CITA committee, on the subject, "Toll Compensation for Independent Toll Traffic."

Elected to guide the Western Counties association for the 1960-61 year are: President Robert Risdon, of Thorndale, Ont.; first vice president, Roy Sweetman, of Essex, Ont.; second vice president, A. R. Gordon, of Thamesville, Ont.; executive member, John Roundell of Kirkton; and, continuing as secretary-treasurer, Mr. Schmidt. Honorary presidents for the coming year are: C. E. Janes, M.L.A., of Watford, Ont.; and A. H. Brown, of Byron, past president.

This quartet of telephone men talked business with an optimistic view from the vantage point of the 50th anniversary meeting of the Western Counties Telephone Association held recently in London, Ont. They are (left to right): Roy Sweetman of Essex, Ont.; W. G. Chapman, of Dresden, Ont.; Alex H. Brown, past president, of Byron, Ont.; and Harold Schmidt, secretary-treasurer, of Baden, Ont.

Telephone Aids Sales Contest, College, Rural Business

It has long been recognized that the telephone as a sales tool has no peers, and a look around the United States and Canada provides insight into its sales uses by both business and nonprofit organizations.

In Newton, Ia., a three-day telephone marathon brought the Maytag Co. the equivalent of more than five weeks' appliance business in 72 hours.

During Maytag's "Operation 72," the company's top executives headed by Chairman Fred Maytag II and Pres. George Umbreit, manned a battery of 15 telephones taking dealer orders for 10 or more appliances from Maytag's field salesmen.

These fieldmen spent the three days and nights calling on their dealers and taking orders. Special incentives were put into effect during the period.

The control center in Maytag's headquarters building was lined with huge scoreboards listing each of the more than 200 field salesmen. Using these boards, incoming orders were posted and tabulated.

One order even came in for a freezer to a customer in Kodiak, Alaska.

More than three-fourths of the salesmen exceeded their individual quotas, several doubling and tripling them. Encouraging them to call at all hours was a system of time prizes. A hundred pre-selected times during the 72 hours were each assigned a prize, ranging from a hi-fi set to a pair of shoes for every member of the winner's family. The salesman calling in nearest to each time received the prize.

Maytag has held four such marathons. The last was in May 1958. This year's final total exceeded the 1958 result by 25 per cent.

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Beloit (Wis.) College, a liberal arts, privately-endowed school has found a new role for the telephone to play in raising contributions by allowing old grads to visit the campus by telephone.

Invitations were mailed to 4,410 alumni residing in New York, Chicago, Boston, Washington, Detroit, Denver,

San Francisco, St. Louis, Minneapolis, Milwaukee and Rockford, Ill.

These former students were invited to "get on the line for Beloit College" by calling a number given on the invitation.

The alumnus who called for alma mater heard a recorded message, opening with a brief introduction by the school's alumni secretary.

A few inspirational words then followed from Miller Upton, Beloit's president.

Next came a recorded bit of praise from the late Prof. Robert K. Richardson. This excerpt was taken from a speech recorded some years ago and was expected to awaken memories for older alumni.

Also provided were the sound of chimes from Beloit's chapel, snatches of school songs by the college choir, and finally a pitch for a contribution to the alumni fund.

This was made by the originator of the telephone idea, Wendell Galloway, a Rockford, Ill. advertising executive and chairman of the alumni fund drive for 1960.

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In Canada, the telephone is being used to help rural businessmen regain some of the customers they have lost to urban competitors.

Through the medium of foreign exchange service provided by the Manitoba Telephone System, Winnipeg residents shopping for new cars can dial directly to Steinbach, 40 miles to the southeast or to Stonewall, 20 miles to the north and get demonstration rides from rural car dealers looking for city customers.

Or, a city businessman can dial a city number for immediate connection to a printing plant in Altona, 67 miles away; a Lake Winnipeg shipping line at Selkirk, or a cannery at Winkler.

The service is provided, the Toronto *Financial Post* reports, only if circuits are available to spare.

One group of rural cooperatives uses a party line.

Rural businessmen find the city connection and the listing in the Greater Winnipeg telephone directory, a good investment.

One rural car dealer, Ed Rutherford is quoted as saying, "In the first year after getting the city line, our gross went up by one-third, meaning that we have been getting back some of the business lost to city firms dealing in the country."

Leadership and Character

Cogent thoughts gleaned from the annual commencement circuit include these from Albert R. Beatty, assistant vice president of the Association of American Railroads, when he addressed the graduates of Aquinas College, Grand Rapids:

"World supremacy is obtained and maintained largely by military might and worldly riches. World leadership comes from national character, which, in turn, inspires trust and confidence on the part of other peoples. When national character deteriorates, leadership wanes. As leadership is threatened, so is world supremacy . . . a nation is no stronger than the morality and faith of its people."

J. C. Herbert Elected Vice President, General of Pa.

The election of John C. Herbert as operating vice president of the General Telephone Co. of Pennsylvania, effective July 1, was announced on June 23 by L. F. Shepherd, president.

J. C. HERBERT

Mr. Herbert has served as general commercial manager of the company since Apr. 1. Prior to this time, he had been commercial manager of the York (Pa.) Telephone & Telegraph Co.

General Telephone Co. of Pennsylvania, with divisions in Erie, Johnstown, Oil City, Somerset, Sayre and Vandergrift, assumed responsibility for the operation of the York Telephone & Telegraph Co., following acquisition of the York firm by General's parent firm, General Telephone & Electronics Corp., in 1959.

A native of Harrisburg, Mr. Herbert is a veteran of the telephone industry, having started as a part-time installer while still in high school. He received a bachelor's degree in electrical engineering at the Pennsylvania State University and a master's degree at Massachusetts Institute of Technology.

He was employed by Radio Corp. of America in radio receiver research at Camden, N. J. and later was general manager of the Union Electric Co., a subsidiary of United Telephone Co., Indianapolis, Ind., before becoming associated with York Telephone & Telegraph.

Columbia Plans Expansion Under Government Control

The Columbian Ministry of Communications has announced a five-year expansion program, which it is estimated will cost 17 million dollars, according to a report in the New York *Journal of Commerce*. Most service will be directly controlled by the national communications agency, Empresa de Communicaciones.

All America Cables & Radio, Inc., headquartered in New York City, has begun curtailing its services in Columbia as specified in a contract signed with the government.

The United States company will be limited to service from Cartagena and Barranquilla and to operation of the New York terminal of a Bogota-New York radio service.

Under the expansion program, the government plans to extend radio and telephone service to outlying areas and to improve existing facilities.

Communications offices are to be opened in every town, all of which will be equipped to retransmit messages.

Direct dialing between Bogota and departmental capitals is also planned.

State, Local Government Workers Up 40 Per Cent

There are 8½ million civilian government workers, federal, state and local, or about one for every 21 Americans, Tax Foundation, Inc. estimates.

The most recent count shows there were nearly 200,000 more government workers last October than there were in the same month the year before. Most of this increase came at the state and local level. Federal civilian employment in 1959 was 2.4 million; state and local, 6.1 million.

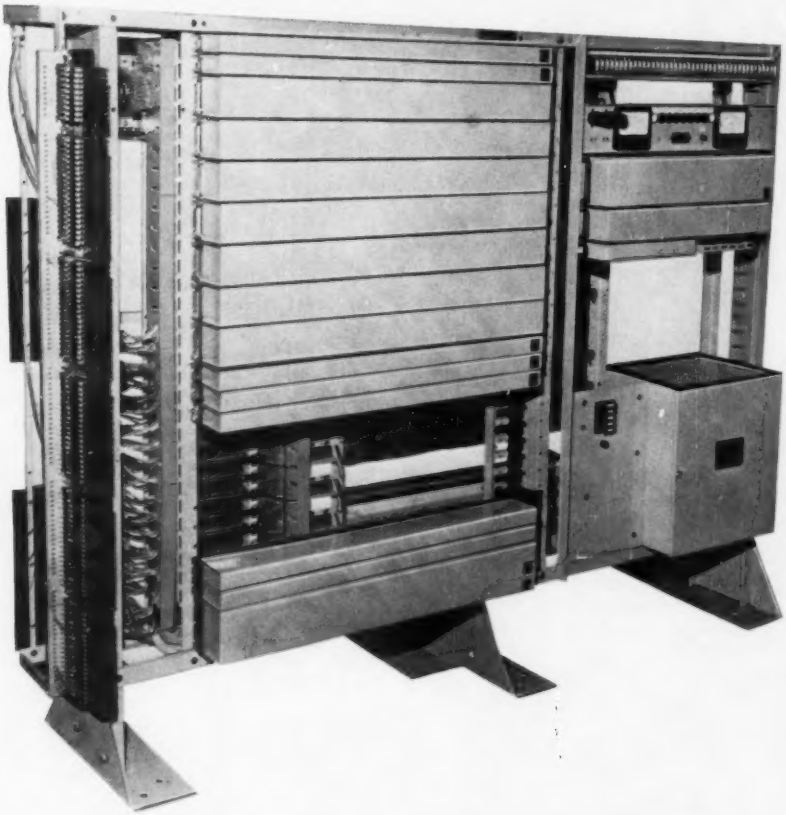
This latest census of government employes shows that while federal civilian workers have decreased by 35,000 in the period from October 1946 to October 1959, state and local employes have increased by nearly 2 million.

From 1951 to 1959, employment by state and local governments (on a full-time equivalent basis) rose by 40 per cent, while monthly payrolls (October) of these governments doubled from 1 billion dollars to 2 billion dollars.

Total public payrolls, for October 1959, including Alaska and Hawaii, were nearly 3.1 billion dollars, up about 137 million dollars over the preceding October.

News on New Products

SWITCHBOARD FOR SMALL COMPANY CDO—Stromberg-Carlson has announced a new switchboard for use by small operating companies with a station-count below what used to be considered a "minimum" to justify conversion to dial.



Called the "XY-Compak-I," the board is a 100-line CDO, equipped in any capacity desired. In operation, it is a step-by-step system fully equivalent to the XY dial equipment.

The switchboard is stocked as a fully-assembled basic unit, universally wired to meet varying local conditions. The design features flexibility in ordering line components, and a bare minimum for installation time, according to Stromberg-Carlson, which gives these instructions:

Simply uncrate the self-supporting frame which includes a factory-installed supervisory panel; jack in the XY universal switches and circuit plates as ordered; connect the line side of the built-in MDF; bolt the battery charger in place; connect battery cable; test lines.

The design concept of this switchboard stresses small size—5 feet 2 inches high, 7 feet long, including power panel and MDF, 1 foot 6 inches wide at the self-supporting base. It weighs—basic unit, 530 pounds crated for shipment; 1,360 pounds in place and equipped to full capacity. Thus, the equipment is readily moved and lends itself to temporary installation in a growth area before the eventual "wire center" can be determined, Stromberg-Carlson points out.

The company also states the unit can be used by larger companies as a semi-portable satellite, affording the benefits of a line concentrator, but with more flexibility.

The "XY-Compak-I" makes provision for a maximum of 10 trunks (Split-2 groups) for dial-to-dial or dial-to-manual circuits, featuring the "Flexi-Trunk"—a new type of circuit configuration designed by Stromberg-Carlson. The "Flexi-Trunk" makes it unnecessary to wait for a second dial tone and eliminates the need for stop-dial equipment previously required on toll trunks. Trunks to connecting offices are reached by dialing a single digit for toll access, or multiple digits as required for EAS.

The ringing source is a five-frequency transistorized ringing machine. Since it is dc operated, no standby source is necessary. All five outputs are monitored continuously. The built-in MDF has provision for terminating 200 outside cable pairs, offering "A" type protection. Options in jumpering may be taken to comply with local practice. Request NP1351.

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SUPPORTED DROP WIRE—A new drop wire, recently introduced by Superior Cable Corp. features the messenger as an integral part of the jacket.

Designated by the manufacturer as Supported Drop Wire, type IM 2-22, the wire reportedly weighs less than other

TELEPHONY PUBLISHING CORP.
608 S. Dearborn St.
Chicago 5, Ill.

Please have the manufacturer send me without obligation the literature indicated by the following numbers:

NP1351_____; NP1352_____; NP1353_____; NP1354_____;
NP1355_____; NP1356_____; NP1357_____; NP1358_____;
NP1359_____; NP1360_____; NP1361_____; NP1362_____;
NP1363_____.

Name.....

Company.....

Street.....

Town and State.....

7/9/60

types currently in use, contains an extra-strong messenger, and exceeds all electrical tests included in the specifications for any other type drop wire.

The wire is described as consisting of 2-22 gauge soft copper conductors and a 16 B.W.G. high strength galvanized steel support wire laid parallel with an integral insulation and jacket overall.

The insulation-jacket is of tough abrasion and weather-resistant polyvinyl chloride and is designed, the company says, so that the conductors may be separated from the support wire, and the conductors separated from each other, with each retaining its insulation respectively.

Superior Cable Corp. states that supported drop wire IM 2-22, effects savings both in initial cost and installation. Request NP1352.

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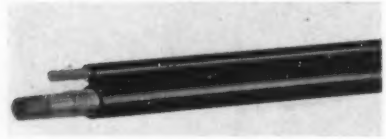
SUPPORTED EXCHANGE CABLE—Also available from Superior Cable Corp. is a new supported exchange type IM cable designed to eliminate the need of spinning or supporting cable to a messenger which has previously been installed.



The company states that its IM cable can be installed in one operation inasmuch as the messenger is an integral part of the cable jacket, yet is available for support, gripping, pulling and tensioning. Inexpensive hardware and newly developed construction practices are employed.

The cable is available with standard core construction of the Superior Tel-u or Tel-cu type, or exchange type constructions with insulated conductors and longitudinally applied, corrugated aluminum or copper shielding. Other types of communication and control cable construction can also be provided with an integrated messenger.

The messenger, a 7/32-inch stranded 1 x 19 with 6,300 pounds breaking strength, is described as being jacketed as an integral part of the cable with tough, abrasion and weather-resistant polyethylene. Sizes range from 6 to 100 pairs with 24, 22 or 19-gauge soft copper conductors.

This cable exceeds current industry specifications, Superior says, and is reported to have the capability of being installed four times faster than conventional-type exchange area cables. Request NP1353.

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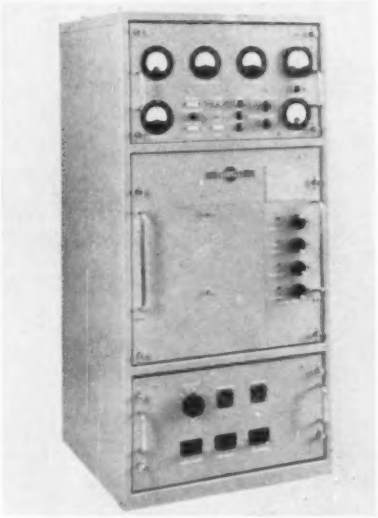
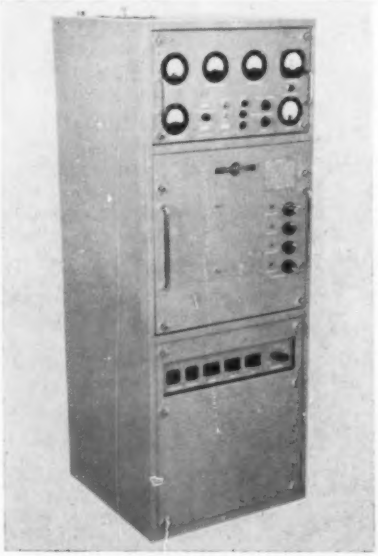
UHF AMPLIFIERS—Two new UHF power amplifiers, the 240F-2A, and the 240F-2B, have been introduced by the Texas division of Collins Radio Co.



240F-2A UHF power amplifier.

Both the 240F-2A, utilized for transportable scatter communication, and the 240F-2B, designed for fixed station scatter operation, are reported to deliver 1 kw output power and operate in the 1700-2400 mc range.



240F-2B UHF power amplifier.

The 240F-2A, which weighs 350 pounds, occupies a floor space of 24 by 24 inches and stands 51 inches high. The 240F-2B weighs 580 pounds and is 24 by 24 by 64 inches.

Primary power requirement for the 240F-2A is 208 volts ac, 3 phase-4 wire, 380-420 cps. For the 240F-2B, it is 208 volts ac, 3 phase-4 wire, 47-63 cps.

In both amplifiers, a four-cavity, air-cooled, permanent magnet klystron is used to provide a minimum power gain of 55 db synchronously tuned and 40 db when tuned for maximum efficiency. The synchronously tuned condition provides a bandwidth of approximately 2.5 mc. When tuned for maximum efficiency, a bandwidth of approximately 12 mc is obtained, the company says.

The power supply, klystron cabinet, and the control and meter panel are modular units in both amplifiers and can be removed for maintenance or replacement. Request NP1354.

•

VOICE FREQUENCY REPEATER — Budelman Electronics Corp. announces the new Budelman type 251A voice frequency hybrid telephone repeater which provides two-way amplification of voice frequencies and was designed for use on trunk and subscriber telephone wire lines.

Each of the repeater's two amplifiers provide up to 20 db gain. The repeater

is equipped with by-pass circuitry to permit d-c or low frequency a-c ringing current to pass around the repeater.

Since it employs transistors, the new VF repeater draws only 3.4 milliamperes (0.0034 amperes) from a 12-volt, 24-volt, or a 48-volt central office battery d-c source. Frequency response is flat within ±1 db from 500-3000 cps, down 3 db at 300 cps and 3500 cps. Maximum undistorted output of each amplifier is +2 dbm into a 600-ohm line.

Four of the new type 251A repeaters require only 1¾ inches of rack space. A mounting shelf, which accommodates four of the plug-in repeaters, is only 1¾ inches high and 19 inches wide and fits standard telephone relay racks. Request NP1355.

•

HEAVY DUTY TOWER — Another heavy duty communication tower, the Rohn No. 55, has been added to the line of towers of the Rohn Mfg. Co.

This tower is described as providing excellent rigidity and strength in heights

Supplies! When you need them most

"MOON": Hello, Ed. Glad to hear your voice! We were afraid that hurricane might have you folks in real trouble.

ED: Well, we're in trouble, believe me, right up to our cross-arms, Moon.

"MOON": Sorry to hear it, Ed. What can we do to help?

ED: We've got to have a couple of reels of 100 pair 24-gauge plastic-covered cable . . . 10,000 feet of drop wire . . . 50 three-way expanding anchors . . . and a couple of hundred 5-foot ground rods and 6 of your white wall phones. And Moon—it all has to be here by tomorrow morning.

"MOON": It'll be there, Ed. You have my word on it.

ED: Good. Another thing, Moon—I just know there's a lot more we'll be needing in a real hurry, but we don't know what as yet.

"MOON": I'll be right here waiting for your call, Ed. You can count on us, for anything you need.

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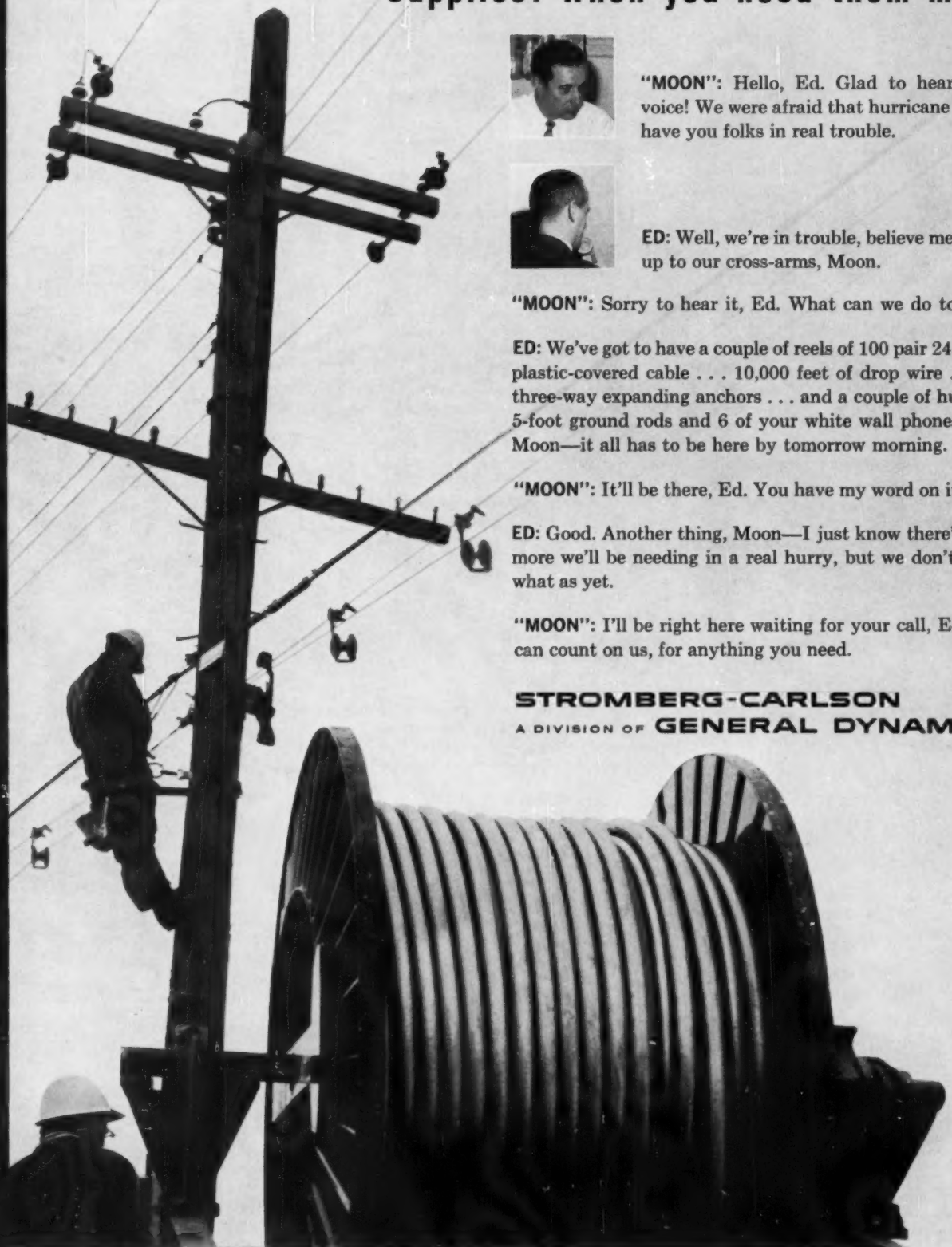

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Improved electrical qualities make practical typical subscriber loops of 14 to 15 miles with normal voltages and equipment. Also can be used for subscriber carrier.

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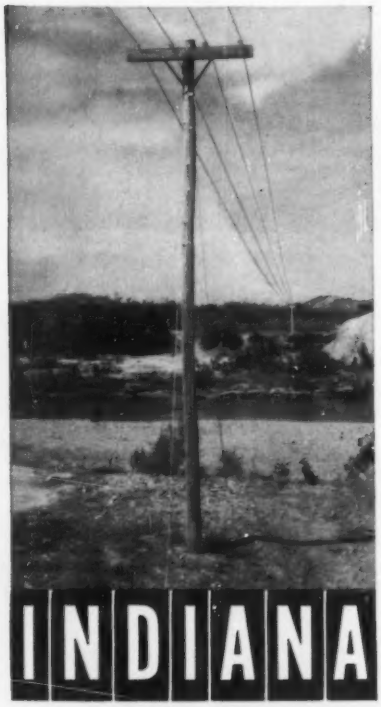


INDIANA

STEEL & WIRE CO., INC.

MUNCIE, INDIANA

up to 450 feet in a 30-pound-per-square-foot windload. When properly guyed, the tower can hold approximately 12 square feet of antenna at its maximum 450-foot height.

The 10-foot sections are constructed on an 18½-inch equilateral triangle pattern utilizing the Rohn "zig-zag" design. Its electrically welded sections, which are hot dipped galvanized throughout after fabrication, are joined together by sleeve joints. Request NP-1356.

•

ALUMINUM LADDER RUNG—A new type of aluminum rung for Himco Fiberglas safety ladders has been announced by Henry Hopfeld of the Hopfeld Industrial Mfg. Co.

Said to be a unique design, the rung is round for maximum strength, yet flat on top for the greatest ease and safety in climbing or standing.

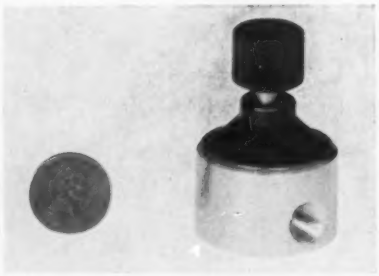
Carborundum grit is imbedded on the standing surface, affording maximum non-slip safety, particularly when muddy, icy or wet, the company says. Rung ends are designed so that, when pressed into rails to form a ladder, they will not turn (support a torque load of 1,000 inch-pounds) and will not pull out of rail (rung-rail bond supports approximately 3,000 pounds).

The rung is reported to hold a direct center load up to 1,600 pounds.

The new flat-round rung is now standard on all Himco Fiberglas extension ladders. Request NP1357.

•

PACKLESS VALVE—A new packless valve designed specifically for service where unfiltered conditions prevail has been announced by the George W. Dahl Co. The "Demi" GS features a soft diaphragm which is reported to give ease of operation and to be unaffected by particles of dirt trapped against the valve seat.



The resilient diaphragm is able to withstand deformation by trapped impurities while still providing tight shut-off even during prolonged "closed" intervals, the company states. When the valve is opened and the particles are "washed" away, the diaphragm resumes its original configuration.

The compact Demi GS is said to be ideal for instrument air and other gas and liquid services. It is rated for 500 PSIG and will close with 10 inch-pounds of torque at that pressure in dead end service.

Knurled-knob actuators are available; soft diaphragms of neoprene, Viton A, buna, etc., can be specified. The Demi GS is furnished in brass with ⅛-inch or ¼-inch NPT connections. Bonnets can be supplied for panel mounting. Request NP1358.

•

DUAL POLARIZED MICROWAVE ANTENNAS—A series of dual polarized 6 kmc antennas is now offered by Andrew Corp., manufacturers of antenna system equipment. These antennas combine two microwave signals in a single antenna. The two signals are fed to the antenna by independent waveguides.

The design, the manufacturer states, eliminates the need for circulators, reduces tower windloading, installation and maintenance cost.

The mechanical specifications of these antennas are similar to those for comparable sizes of the Andrew plane polarized 6 kmc antennas. The antennas are offered in 4, 6, 8 and 10-foot sizes. Request NP1359.

•

MASONRY FINISH—Kwal-Krete, a finish which can be applied to all masonry surfaces, has been announced by Kwal Paints, Inc.

Applicable to cinder block, concrete block, concrete brick and concrete, Kwal-Krete, when used according to specifications, will prevent absorption of moisture through these surfaces as well as the infiltration of dust and dirt, the company says.

The finish, as well as being a sealer

for porous surfaces, is also said to provide protective beauty to structures. Being alkali-resistant, it may be applied to fresh concrete surfaces without prior treatment.

Normal tools used by painters can be used for Kwal-Krete's application, according to the company. It may be either brushed, sprayed or rolled-on.

It is available in eight standard colors but can be special-ordered in any color.

The finish is not designed to withstand hydrostatic pressure and is not to be used below grade. A special thinner is required.

It contains Pliolite S5, a product of the Goodyear Tire & Rubber Co. Request NP1360.

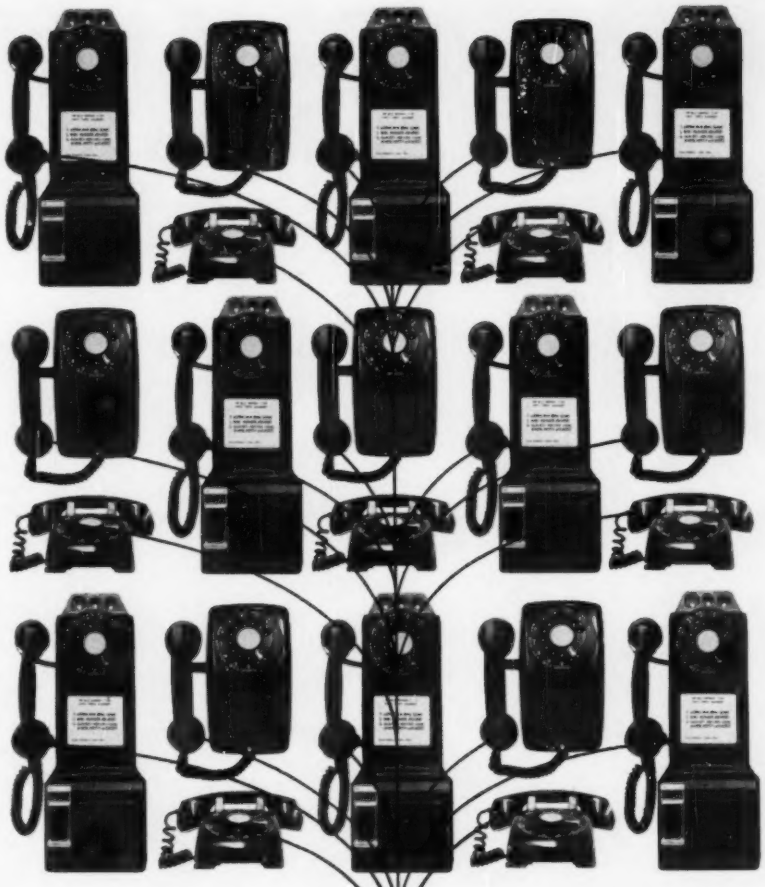
•

MASTER ALARM SYSTEM—Motorola, Inc. announces that as many as 480 functions in a microwave system can be monitored through its new alarm and fault finding system. The new MA-1 system indicates station condition, overall system conditions, and individual function condition.

Master alarm station.

Utilizing the microwave RF baseband for operation, the new system consists of a Master Alarm Station and a series of reporting stations. The system can accommodate 24 stations with up to 20 functions at each.

Should a fault occur, Motorola states, the "alert" lamp for the reporting station lights, and an audible signal is



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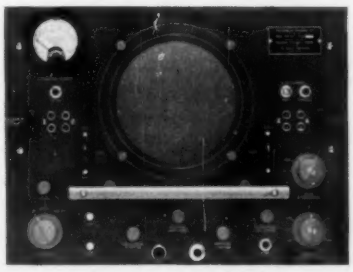
You can meet the challenge of modern, ever increasing service demands; the far more stringent test requirements resulting from D.D.D.; by application of the new Hallamore designed and manufactured Swept Band Transmission Test Set. This unique instrument affords fast, completely accurate transmission measurement (including repeater or amplifier gain, determination of return losses, and location of loading faults). Readings are in visual form, easily photographed to provide a permanent record. Range is from 200cps to 4000cps. Unit may be rack mounted or may be used for greater mobility on a Hallamore test wagon. Accessories include a Hybrid Test Set, Camera Attachment, and Artificial Lines. For detailed information, please write Hallamore, Telephone Department, 714 No. Brookhurst St., Anaheim, California. PRospect 4-1010, D.D.D. area 714.



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sounded to alert the master station operator. The operator then "interrogates" the station reporting the fault to determine which function has alarmed.

The company says that such functions as tower lights, illegal entry, operation of emergency power unit, switchover to standby RF units, high temperature, low pressure, or any one of a multitude of meter limit or relay closure conditions can be indicated by the alarm system.

Alarm indicator module.

Several checks to assure correct reporting are provided in the new system. There are provisions to alert the operator of faults that are merely intermittent. Also, the operator is warned of the reception of garbled or incomplete codes, indicating a need for rescanning the station in question.

Motorola also says no multiplex equipment is needed for either the master station or reporting units.

The new Motorola system can serve as an optional control system, furnishing off-on operation for up to 456 functions, the company adds. Request NP1361.

•

TAPE WINDER — Completely automatic collection of tape is said to be a simple operation with a new tape winder introduced by Comptometer Corp.'s Western Apparatus Co. division.

The tape winder is designed for use in storing of transmitted tape, in teletypesetting of newspapers and magazines, in integrated data processing, in

automatic letter typing, and wherever teletypewriter equipment is used.

Equipped with a 12-inch metallic reel, the Western Apparatus tape winder holds a large capacity of tape—up to 1,300 feet of chadless and up to 2,000 feet of fully perforated tape. Winding tension is adjustable to obtain maximum tightness without tearing the tape, the company says.

The tape winding operation is protected by a standard built-in safety device, which cuts off motor power when the run of tape becomes taut.

Sets of parts are available to mount the winder on Teletype 28 Type Consoles, on Teletype 19 Type sets, on Teletypewriter Reperforator Tables, or it can be converted for use as a portable unit, Western states. Request NP1362.

•

COMBINATION PLATFORM-POLE TRAILER — The Atlas Trailer Mfg. Corp. has developed a multipurpose extensible trailer which combines into one unit the features and functions of two trailers (a pole trailer and platform trailer). This, the company says, overcomes the capital outlay, registration, insurance and maintenance costs usually expended on infrequently used equipment.

The new combination platform pole trailer is known as the Atlas Extendable and is basically a platform trailer for the normal hauling of flat loads.

It is said to be available at little more than the price of one flat-bed.

However, the Extend-able is adjustable to a full length pole trailer of 55 feet. Intermediate settings of 5 feet spacing are also provided which range from the basic length of 35 feet to 40 feet, 45 feet, 50 feet, and 50-foot lengths.

Each 5 foot adjustment can be made manually by one man, according to Atlas, with extended length securely and automatically locked into position on steel telescoping tubes. Air hose and electric lines are positioned to extend with each 5-foot adjustment. Request NP1363.

IN THE NATION'S CAPITAL

Continued from page 20

period of dynamic growth and increasing complexity of utility services. Regulation is a delicate machine and it requires continual tinkering and adjusting to meet new problems as they arise. We need only to look at our railroad and transportation difficulties and at the bottleneck of natural gas producer cases before the Federal Power Commission to realize that much remains to be done. And much may have to be done by legislation.

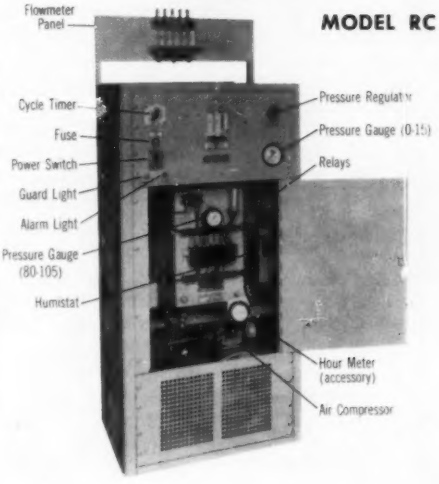
All Change Is Not Progress

At the same time there is a danger of going too far. We know that a feeling of disillusionment and uncertainty has tempted other nations to follow the cult of economic determinism which has led to the excesses of Communism. This temptation could influence our legislative policies to some degree, and I think disastrously so. Economists know that the cult of economic determinism—fostered by Marx and nourished on our native soil by Veblen in economics, by Dewey in philosophy and education, and even by Holmes in legal theory—has placed man in his relation to the world in a new light. In this light, whether in the field of science or politics or history, mere man emerges as a trifling addendum to the great mass of natural forces inexorably operating in a materialistic universe. Under this view, there has been a retreat from individual responsibility. If one might digress, we see the influence of this view at work in various fields, including that of law.

In criminal law, for example, it has become fashionable to regard the wrongdoer as sick rather than guilty. If he is the unlucky inheritor of the wrong combination of instincts and environmental influences he is to be treated, not punished. And whether he was an only child or a child of too large a family

be prepared

S&G



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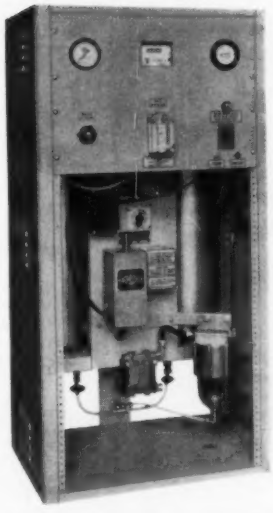
Developers of the Dry Air Dehydrator Used Extensively by Many Operating Telephone Companies to Protect Telephone Cables from Moisture

MODEL A



Advantages of using Dry Air Dehydrators (Desiccant Type):

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- Eliminates cable moisture
- Saves maintenance hours
- Saves maintenance dollars
- Converts dollar savings into earnings
- Better service to your customers
- Cable plants prepared for dry air dehydrators definitely reduce maintenance cost
- The cost of installing dry air dehydrators is minor compared with the many advantages to be gained
- Dry air dehydrators are available to suit your cable plants
- There is no easier way to improve your operations and earnings than by the S & G dehydrator

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or loved too much or loved too little, he is to be excused if the mental stresses of life have put him upon the path of evil-doing. By this logic we should tear down our jails and build insane asylums instead.

As a believer in individual free will, this writer must confess that upon reading some of these modern criminal law decisions he wonders if the day is not coming when we ought to build *sane* asylums as a refuge for sensible people.

In the field of political economy, the cult of determinism has reached equally absurd lengths. For if no man is a culprit and no man is responsible in any degree for his own security and well-being, then society—meaning the government—must somehow provide that which he needs or thinks he needs. So we have the socialist formula of combining all the material wants of particular groups and wrapping them up in a package called "the general welfare." This package, of course, is to be bought with tax money, obligating generations unborn to feed the social welfare appetites of a contemporary electorate.

The cruelest aspect of this formula is not that it cannot be delivered as promised, but that it can destroy the productive machinery which has made possible so many of the benefits; yes, and the liberties, which we actually do enjoy today. We can tax the rich out of existence in a fairly short time. After that there is only left the taxing of the poor into economic slavery.

Now the reader is wondering what all this has to do with public utility regulation and legislation affecting it. There are people abroad in the land today—our land, not England or France or Russia—who would lead us down this primrose path of socialization, starting, of course, with our public utilities. It always starts with public utilities. At least it always has in every country that has gone socialistic by degrees, as distinguished from revolution.

The Shortcomings of Regulation

It is understandable that there should be impatience on the part of our lawmakers over some of the shortcomings which have been revealed in the operation of our federal regulatory commissions. We know as the result of the Harris subcommittee investigation that there have been irregularities.

But, repairing damage is one thing and burning down the house of regulation to get rid of a few pests is something else again. Criticism of our commissions is not new. We have had it often in the past, as well we should. But always in the past such criticisms have resulted in strengthening and improving the commissions. And so it should be today.

But, as has been already explained in this department, the danger of some of the alternatives now proposed in Congress would be the end of the regulatory commissions as we know them. Such is the proposal to strip the regulatory commissions of their present authority by dividing them up into two or three pieces and handing the pieces around to Cabinet departments of government or special administrative courts.

Should the Commissions Become Courts?

Let us consider, next, the other parts of the proposals made in so-called "reform bills" now before Congress. In order to get away from the irregularities of ex parte contacts, it has been suggested that we turn our commissions into specialized courts with all the rigid procedure, court rules of evidence, and judicial rituals.

Strangely enough, those who urge such change seem to have come full circle in their reasoning. When our federal and state commissions were originally set up in the early part of the century, it was to get away from the formalities and rigidity of court procedures. If we go back to the judicial process, it will certainly not solve the problems of regulation, but only add to them.

We must eventually expect some sort of legislation to clean up the ugly scandals which have been brought out in the House committee's investigation of the rigged television programs and the "payola" radio broadcasting practices. Ultimately, a bill such as that urged by the American Bar Association to clarify the standards of good conduct which our regulatory commissioners should observe, will probably be enacted.

There is a certain amount of pressure on the Harris committee to do something about all these irregularities which have been brought into the open. But we must not expect too much from mere legislation. If a commissioner or a lawyer or anybody else in the regulatory picture is not an honest man in the first place, he cannot be made so by passing a law. And if he is honest and qualified he will not need a law to do his duty. But, since there seems to be uncertainty over what the right thing should be, any legislation that will clear up the matter should be helpful.

But, there are many things in the field of regulation which cannot be settled by legislation. These are exactly the sort of things which regulatory

"expertise" is supposed to encompass. Nothing is more likely to put the utilities as well as the commissions in a strangulating regulatory strait jacket than to attempt to spell out formulae or precise methods of regulation by legislative fiat. That would be turning the clock back before Smyth *v.* Ames.

We might conclude this discussion of regulation and its relation to legislation by simply agreeing that commission regulation is probably here to stay. It seems to have worked out better than any other system as far as practical results and public benefits are concerned. It is not perfect. It will always need adjustment and occasional reform. But merely to glance at the alternatives to commission regulation, as such, should make us—all of us, including the lawmakers—want to hold fast to that which we have.

PBX CUSTOMER—A GOOD-WILL AMBASSADOR

Concluded from page 22

those in charge of the meeting because they are beyond the confines of their authority. Had there been a company management person of the upper echelon sitting in with the conferees, the embarrassment of delay in giving the answers would have been avoided.

We tell the PBX people that their service will suffer if their whole organization does not work as a team. Perhaps our own management people should recognize this truism. They, too, must get behind any program that brings about good service for the mutual benefit of all concerned.

In technical magazines, articles are written by experts who explain the operation of newly advanced telephone equipment. Brochures, pamphlets and many advertisements in newspapers and periodicals plead incessantly for customer understanding of our service problems. But how often does our management sit down with the folks who contact these important people and hold a brief session on what is happening in the world of our best customer . . . Mr. PBX? Not often enough, I am sure.

In conclusion, I would like to suggest that improvement in the quality of PBX service, and that of our central offices, and the reduction of complaints can be brought about more easily if our management recognizes that the successful future of our new method of toll transmission, Direct Distance Dialing, lies largely in the hands of our PBX customers. The dial is taking the personal touch out of local service and the customer and the telephone company are growing farther and farther apart as our toll dialing schedule expands.

The PBX subscriber is our big salvation. He will be our strength. He and his people will be our good-will ambassadors. Through them we can maintain the good reputation we have had ever since the telephone became a reality.

We cannot afford to lose the prestige we now have. We keep telling our PBX friends, good customer relations result when everyone from top management down puts their shoulders to the wheel and exerts their efforts to give the best telephone service possible. We must have confidence that telephone company management will do as much, and work as a huge team, with those under their supervision to assist the PBX people to do just that.

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. . . Then rest assured *you* have poles with the best in preservation. Here's why . . . each step in our production is subject to precise and accurate control, timber selection, manufacture, moisture removal and treatment. And, only the finest chemical preservatives are used. You get uniform high quality, the best in preservation and maximum service with the T-C brand on your poles.

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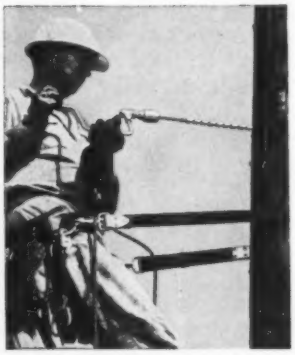

No stopping to clear chips, not even in creosoted poles

Now get easier, faster, non-stop boring action in telephone and power poles with the new Irwin 415T Pole-Bor bit. Chip flow is continuous. Special Irwin cutting head, twist angle, and smooth-polished hollows eliminate clogging and binding — even when boring clean through creosoted poles. Spur on head outlines hole ahead of cutting edge. Side lip then smooths hole, making it easier to insert bolts or pins.

And Irwin's exclusive and patented Adapter Shank chucks perfectly in both hand braces and electric drills to cut inventory costs by 50%, speed work on the job. All Irwin Pole-Bor bits are made of special high analysis steel, heat treated full length and machine sharpened for extra accuracy, longer life. Save time, save money. Order from your Irwin distributor.

Overall Length: Approximately 18", with 12" twist, 6" shank
12 Sizes: 6/16" to 17/16"

Irwin Adapter Shank fits both hand braces and electric drills

Comes like this with taper square shank for use in hand braces.

Cut off taper square shank. Use in both hand braces and electric drills. No wobble, no run-out.

IRWIN Wilmington, Ohio
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Name Wilson Carrier-Radio Sales Engineer for AE

Roger A. Wilson was named a carrier and radio staff engineer for Automatic Electric Sales, Northlake, Ill., it was announced recently.

Headquartered in the Minneapolis office, he will provide engineering and consulting service for customers in the north central district, which includes Iowa, Colorado, Minnesota, Wisconsin, Nebraska, North Dakota, South Dakota, and parts of Michigan and Montana.

Mr. Wilson's appointment was made to improve the company's carrier and radio sales service.

Mr. Wilson was formerly associated with the Northwestern Bell Telephone Co. He also served in the U.S. Army Signal Corps.

Bassett, Holzer, Parkhurst In New ITT Market Posts

The International Telephone & Telegraph Corp. has announced the creation of three major international marketing positions and the promotion of three executives to fill them.

John J. Bassett has been designated director of telecommunications marketing; Frederick Holzer has been appointed director of consumer marketing; and Burrell A. Parkhurst has been named director of components marketing, according to H. S. Geneen, president.

Each executive will report to Alfred di Scipio, vice president and director of marketing and commercial development.

A native of Aberdeen, S. D., Mr. Bassett has been with ITT since 1946, when he joined International Standard Electric Corp. as an attorney. Since 1957, he has been a vice president of ISEC, ITT's holding company for its foreign manufacturing and research operations.

During World War II, he served with the U. S. Army Signal Corps in France and Germany. He is a lieutenant colonel in the U. S. Army Reserve and is a member of the Armed Forces Communications & Electronics Association.

Mr. Bassett will direct marketing activities in the telephone and telegraph field, developing and co-ordinating world-wide telecommunications product and market programs for the ITT System.

Mr. Holzer, director of consumer marketing, received his primary education in Germany and Switzerland, and was graduated from New York University with a bachelor of science degree in foreign marketing.

During World War II, he served with U. S. Army Military Intelligence units and saw duty with the general intelligence staff of the British Army in the United Kingdom, France and Germany. He also served with the U. S. Military Government in Germany.

Mr. Holzer is a member of the International Executives Association.

Formerly assistant general manager of the international division of Servel, Inc., Mr. Holzer joined the ITT System in 1958, as a member of the ISEC executive staff.

In his new position, Mr. Holzer will be responsible, first for directing and coordinating ITT's existing consumer marketing activities, primarily, outside the U. S. at this time; and second, for developing plans and programs to market ITT consumer products and services within this country.

Mr. Parkhurst, who joined ITT in 1957 as president of its domestic components division in Clifton, N. J., formerly was associated with the Waldorf Instrument Corp. As head of the components division he was responsible for the Clifton; Roanoke, Va.; Palo Alto, Cal.; and Woonsocket, R. I., facilities and for Kuthe Laboratories, Newark, N. J., manufacturer of hydrogen thyratron tubes.

A native of East Orange, N. J., he was graduated from the Stevens Institute of Technology with a mechanical engineering degree.

Mr. Parkhurst is a member of the National Security Industrial Association, the American Ordnance Association, and of the American Society of Naval Engineers.

In his new post he will be directing and co-ordinating components marketing activities and programs for the entire ITT System in the field of electronic, electro-mechanical and mechanical components.

Mr. di Scipio said these positions represent a major step in the revised organizational structure of ITT world headquarters. He added that the company plans to integrate its resources into centrally directed and co-ordinated programs to achieve maximum sales and profit gains from all world markets.

Although the new directors are essentially concerned with marketing, the company will look to them for leadership in all phases of those markets for which these men are responsible, Mr. di Scipio said.

Two-Way Deal

"We demand that big business give people a square deal; in return we must insist that when anyone engaged in big business honestly endeavors to do right, he shall himself be given a square deal."—THEODORE ROOSEVELT.

MO.-KAN. CONVENTION

Concluded from page 31

souri and Kansas associations held their respective business meetings.

The Missouri group elected the following directors:

P. A. Browne of Clarence; C. W. Chastain of Princeton; Clifford T. Davis of Sullivan; E. J. Ernest of St. Louis; John Gault of Buffalo; Fred B. Hunt of St. Louis; J. G. Kreamer of Kansas City; Foster B. McHenry of Jefferson City; J. M. Roberts of Gallatin; Harold C. Stouffer of Diamond; W. R. Trowbridge of Springfield, and J. L. Van Horn of Grinnell, Ia.

H. Scott Gault of La Plata is an ex officio member of the board.

The Missouri association directors elected the following officers: President, J. E. Bartruff of St. James; first vice president, R. E. Williams of Oregon; second vice president, O. C. Agne of Wentzville; third vice president, Elizabeth Journey of Higginsville; fourth vice president, J. C. Torbett of Wright City; secretary-treasurer, R. W. Hedrick Jr. of Jefferson City, and assistant secretary-treasurer, Katharine A. Bauer of Jefferson City.

The Kansas group elected the following directors:

Howard Culbertson of Sterling; Clifford Heidebrecht of Burrton; T. B. Fegan of Junction City; David McKay of LaCrosse.

Other directors are: Hubert Froman of Edna; W. E. Gault of Gardner; G. A. Hearne of Kansas City, Mo.; J. E. Hoy of Topeka; H. A. Miller of Great Bend; Carroll Nelson of Lenora; George Rooney of Belleville, and Douglas Wright of Hutchinson.

The Kansas directors elected officers as follows: President, Mr. Wright; vice president, Mr. Nelson; treasurer, J. S. Hopkins of Topeka, and secretary, Douglas Gleason of Ottawa.

REVIEW OF NEW PRODUCTS

Continued from page 28

ered units, in 10 and 20-ton capacities, are especially designed for shop service in lifting large trucks, crawler type tractors, power shovels, cranes and similar heavy equipment.

The 10-ton model, SJ740, has a 66 inch long chassis and lifts from a low point of 5⅞ inches to a high point of 24 inches. The complete jack weighs 348 pounds.

The 20-ton jack, model SJ750, has a 68½ inch long chassis and lifts from a low point of 6½ inches to 25½ inches. Weight complete is 530 lbs. Both models

CEECO **IT'S NEW!** CEECO

CEECO TERMINALS FOR DIRECT BURIED PLASTIC WIRE AND CABLE

• Loading one or more pairs as required using Type C152 ready mount assemblies

LUG—3 TERMINAL WITH ONE PAIR TERMINAL ASSEMBLY AND ONE C152-1 LOADING COIL

TYPE CH-3 STEEL "BELL JAR" COVER 8" HIGH

★ **PEDESTALS** — TWO PIECE SIX FEET LONG

★ **POLE BRACKETS**—AVAILABLE FOR AERIAL MOUNTING

★ **LOADING** — LOAD ONE OR MORE PAIRS AS REQUIRED USING TYPE C152 READY MOUNT ASSEMBLIES

★ **NON-PROTECTED TERMINALS** — CP16 ASSEMBLIES AVAILABLE IN ONE, TWO, SIX, TWELVE AND SIXTEEN PAIR COMBINATIONS

★ **ACCESSIBLE** — FOR TESTING, CABLE OR WIRE SPLICING, CROSS CONNECTING AND SUBSCRIBER DISTRIBUTION

★ **ECONOMICAL** — BUY ONLY WHAT YOU NEED—ADD LATER

★ **STRONG** — ALL GALVANIZED STEEL CONSTRUCTION

CATALOGUE NUMBER	DESCRIPTION	CAPACITY	WIRE & CABLE
LUG-3	TERMINAL PEDESTAL ASSEMBLY AND 8" HOOD NO TERMINAL STRIPS, NO COILS	TERMINALS	LOADING
		ONE, TWO AND SIX PAIR	ONE TO THREE PAIR

EXPANDABLE TO MEET YOUR LARGER REQUIREMENTS WITH STOCK HOODS OF 15, 21½ AND 32½ INCHES HIGH

Write us for assistance on your loading problems
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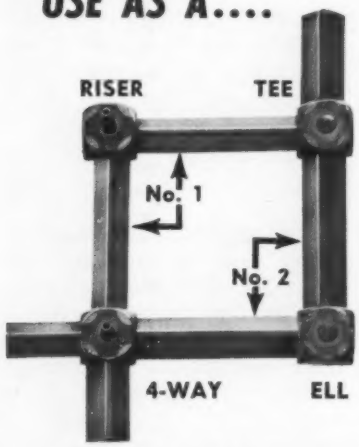
Phone EStebrook 8-3109

Part No. 345 *Patent Pending

NEW, universal fitting* used with the two sizes of Flexiduct solves all over-the-floor wiring problems.

USE AS A....



- **Under Floor Input**
- **Terminal Box**
- **Junction Box**
- **Or In Combinations of All**

Fits any over-the-floor wire molding. This new fitting used with Flexiducts two sizes is the popular, easy solution on all jobs.

Flexiduct No. 1
will carry up to 8 conductors of inside wire. Chase ¼" x ½"

Flexiduct No. 2
will carry up to 25 pair cloth cable or 16 pair plastic. Chase ½" x ¾"

Always Keep Flexiduct on hand

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Graybar Electric Co., Inc.
Leich Sales Corp.
Stromberg-Carlson
Kellogg Switchboard & Equipment Co.
Buckeye Telephone & Supply Co.

WINDERS & GEIST, INC.
2219 North Cotner Blvd.
Lincoln 5, Nebraska

are equipped with 7⅝ inch diameter front wheels and 4 inch diameter caster wheels for easy maneuverability.

•

Hydraulic Cable Cutter. (Fig. 88). H. K. Porter, Inc. has developed this cutter for use by public utilities, electrical contractors, salvage experts and construction companies. Hydraulically operated, these cutters cut through stranded cable in seconds and leave each individual strand perfectly round and unfrayed. Available in two sizes—Model HCS-200 is designed for cutting 2 inch copper and aluminum cable and Model HCS-300 for cutting 3 inch cable.

OITA Honors L. M. Berry's 50 Years in Telephony

The Ohio Independent Telephone Association honored Loren M. Berry on June 10, with a 50-year recognition luncheon in Dayton. R. D. Gott, general manager of the Wellington Telephone Co., and president of the association, awarded a past service pin to Mr. Berry.

Those who receive this pin must have 50 years in telephony, and have served as an officer, director or committee member of the association.

Daniel W. DeHayes, executive vice president of the association, acted as toastmaster for the occasion. Attending the meeting were:

Walter S. Sparling, president of the Ohio Bell Telephone Co.

Clarence Pearce, vice president and general manager, southwest area, Ohio Bell Telephone Co.

T. C. Watts, division commercial manager, Ohio Bell Telephone Co.

George A. Steele, president of United Telephone Co. of Indiana, Inc., Warsaw, Ind.

Warren Slifer, secretary of the Germantown (O.) Independent Telephone Co.

H. F. Clapper, division commercial manager, Ohio Telephone Service Co., Sidney.

J. Warren Safford, president of the Troy-Tipp Telephone Co., Troy.

Mr. Berry founded L. M. Berry & Co. in Dayton in 1910. A telephone directory advertising firm, the company today serves over 270 Bell and Independent telephone companies, and handles more than 900 directories in 5,500 cities and towns throughout the United States.

Holmes to Direct Stromberg's Expanded Education Program

The designation of Lynn C. Holmes, director of engineering operations at the Stromberg-Carlson Division of General Dynamics Corp., as coordinator of all cooperative education programs at the division has been announced by President James D. McLean.

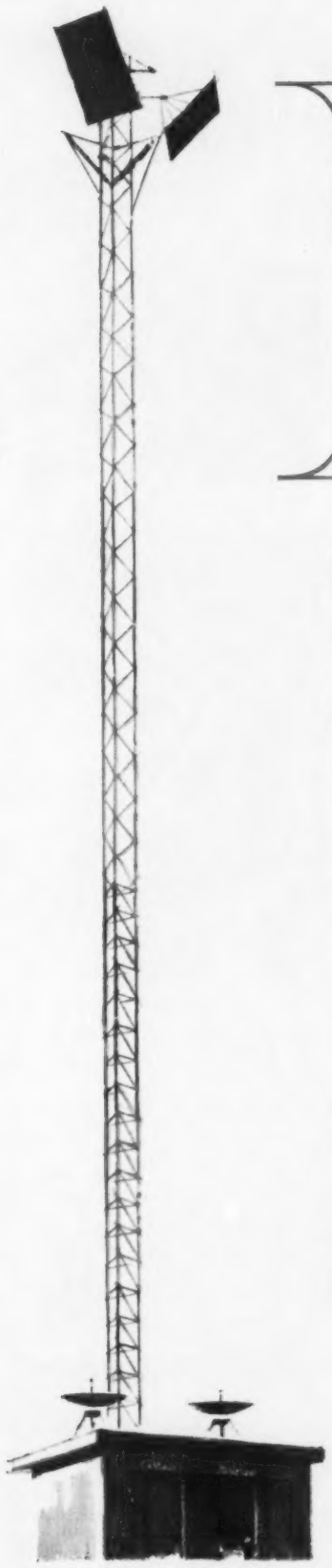
At the same time, Mr. McLean outlined plans for substantial expansion of cooperative education activities at Stromberg-Carlson, with special emphasis being placed on engineering and science, at both graduate and undergraduate levels.

Arrangements already have been made with Cornell University, Ithaca, N. Y., and Northeastern University, Boston, Mass., for expansion of the Stromberg-Carlson cooperative education program at those institutions, according to Mr. McLean.

Under this program, selected students who are working for degrees in science or engineering will be employed part of each academic year at Stromberg-Carlson. This not only will provide financial assistance to the students, but also will give them valuable work experience in the highly technical electronics industry. The schedules of the work and study periods are coordinated to provide maximum educational values to the student.

As plans progress for absorbing

R. D. Gott (left), president of the Ohio Independent Telephone Association, awarding past service pin on June 10 to Loren M. Berry in recognition of his 50 years in telephony.



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Collins now offers complete microwave and carrier multiplex systems capable of operating from a DC battery source. And because of the range of voltage combinations available with the new Collins equipment, you may choose the one that best integrates with your existing battery plant.

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- ✔ Eliminates standby power equipment.
- ✔ Increases operating reliability.
- ✔ Reduces maintenance costs.
- ✔ Utilizes existing battery plants.

For information on how Collins may help you solve your own particular communications problem, contact Collins Radio Company, Texas Division Sales, 1200 N. Alma Road, Richardson, Texas.

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WIRE OR CABLE
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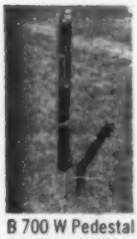
B 800 Cable Terminal Pedestal



B 700 W Pedestal

B 700 W Pedestal

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additional students in Stromberg-Carlson's scientific laboratories and engineering departments, similar arrangements will be concluded with other outstanding colleges and universities in the northeast, according to Mr. McLean.

New emphasis also will be given to another phase of the program, under which regular Stromberg-Carlson employes are encouraged to work for advanced degrees, with the company paying full tuition costs for such study.

Leich Tells East, West Sales Heads; Other Changes

D. C. Gibson, president of Leich Sales Corp., has announced a reorganization of the company's switchboard department.

A. A. SCHNEIDER

R. P. WEED

L. J. JORDAK

Robert P. Weed and Arthur A. Schneider have been named switchboard sales managers for the West and East, respectively. Mr. Weed will be in charge of the western district and Schneider will handle the eastern states. According to Mr. Gibson, this arrangement will permit Leich to give more personal service on equipment to Independent telephone companies in all parts of the country.

Mr. Weed was formerly switchboard department manager, while Schneider was switchboard sales manager.

Construction started this month on a three-story office building in Glassport, Pa., for the Wire & Cable Division of Copperweld Steel Co., F. E. Leib, vice president, has announced. The new building will cost approximately $250,000. The structure will feature window-walls with stone facing on the ground floor. The wire & cable division's headquarters staff will be housed in the building's 15,000 square feet of space.

Under the new arrangement, Leich's staff engineering group is also divided between the two districts, with two staff engineers being decentralized.

Louis J. Jordak will be located on the West Coast, and will cover the states of California, Nevada, Oregon, Washington, Alaska, Hawaii, Utah, Idaho, and Arizona.

Walter P. Horn will handle the southeastern states, and will now be located at Leich's Tampa, Fla., office. He will serve the states of Florida, Georgia, South Carolina, North Carolina, and Virginia.

W. P. HORN

Other members of the staff engineering group are also assigned to districts, but will continue to work out of Leich's Chicago office. William W. Newcum, Daniel R. Mierswa, and Karl H. Wittfoth serve the western district, and Bryce H. Brown is assigned to the eastern district.

W. T. Smith Joins Superior As Chief Engineer

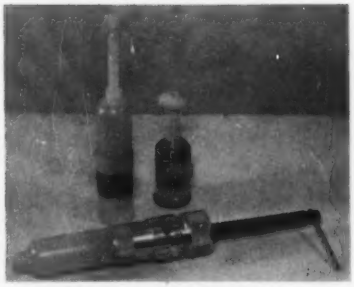
Warner T. Smith, with over 20 years experience in various aspects of the telephone, electrification, and electronics industries, has been named chief engineer of Superior Cable Corp., Hickory, N. C. The appointment, effective June 1, 1960, was announced by J. L. Robb, president of Superior Cable.

Prior to joining Superior, Mr. Smith was associated with Anaconda Wire & Cable Co., first as assistant manager, then manager of sales to government agencies. He has served the Rural Electrification Administration both as an engineer and as assistant chief for staff engineering, telephone engineering division. He also was associated with the Edison Electric Institute, and worked as an industrial analyst with the communications division, National Production Authority of the U. S. Department of Commerce.

W. T. SMITH

During the war, Mr. Smith was a radar officer in the U. S. Marine Corps, working on the development of ground radar equipment and its employment

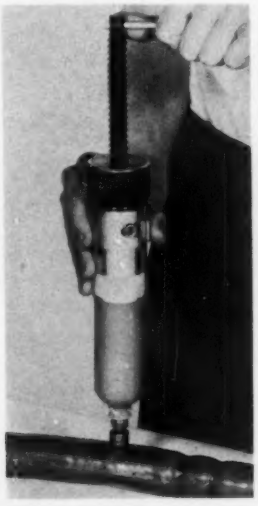
New PRESSURIZED CABLE DAMMING METHOD



The introduction of Semco Sales & Service, Inc., two-part SemKit, has eliminated the problems of mixing and applying resin to pressurized cables. Eliminates incorrect proportioning from one container to another for the mixing operation. Material after mixing will not contaminate the applicating gun.

Mixing of the SemKit is done by:

1. Removing tape Clinch Band from cartridge.
2. Pulling dasher rod to neck of cartridge.
3. Deforming the foil barrier to combine base and activator for mixing.
4. Rotate Dasher assembly in a clockwise motion until material is completely mixed.
5. Pull dasher rod to neck of cartridge and remove.
6. Place cartridge in 755 Screw Gun for application.



Application of the Resin

Place mixed cartridge into 755 screw gun and lock in place with stainless steel retainer Screw in fitting from cartridge to injection fitting and apply. After application remove cartridge from gun and discard.

No cleanup of gun.

No contact with the resin.

No possible chance of skin contact with the resin.

No clean up of personnel.

Numerous operating telephone companies are now using this method of application. Better application methods reduce costs.

For further information contact:

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Patent No. 2,838,210 Others Pending

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in anti-aircraft organizations. He has been active in the Marine Corps Reserve and holds the rank of lieutenant colonel.

A graduate of the University of Maryland with a B.S. degree in electrical engineering, Mr. Smith is a member of AIEE and its wire communications committee.

Raytheon, Italian Companies Form Electronics Mfg. Unit

Formation of a new company believed to be among the largest single electronics companies in Italy was announced jointly on June 26 in the United States and Italy.

To be called Selenia Spa, (Industrie Elettroniche Associate), the new organization will be owned by Raytheon Co., with 40 per cent; Finmeccanica, an Italian governmental holding company, with 40 per cent; and the Italian Societa Edison, with 20 per cent. The new company will be formed of the assets of Finmeccanica's subsidiary, Microlambda, located at Fusaro, near Naples; and Societa Edison's subsidiary, Sindel, with laboratories near Rome. Raytheon is making a capital investment of 3 million dollars.

Manufacturing will be concentrated at Fusaro, in Finmeccanica's electronics equipment plant which was established there in 1952. Raytheon's Dr. Carlo Calosi, vice president-Europe, directed Finmeccanica's electronics activity from 1951 to 1956.

Headquarters and engineering laboratories of the new company will be on the outskirts of Rome.

The joining of these two currently operating companies, it is felt, will eliminate any delay in becoming operational. Both companies now have order backlogs and are in production.

A Raytheon subsidiary will be responsible for the development of Selenia's management organization and will also provide management and technical assistance.

Among initial assignments, Selenia will handle the major portion of the manufacture of Italy's production of the NATO Hawk missile. Hawk, developed by Raytheon in the U. S., will be produced by five NATO nations in Europe. Finmeccanica is prime contractor for Hawk production in Italy.

Selenia will also produce microwave communications equipment, radars, products in the new field of industrial controls, and other commercial products such as facsimile apparatus and electronic test equipment.

The new Selenia organization marks the second industrial venture in Italy of Raytheon. Raytheon and La Centrale, one of Italy's largest financial groups, own Elsi, an electronics company with a plant in Palermo, Sicily, which produces electronic components, including microwave and x-ray tubes and semiconductor products.

In addition to products for the Italian market, Selenia will develop and manufacture products for sale throughout Europe and in some cases worldwide through assistance from Raytheon's overseas sales organization. Sales of certain equipment to European countries other than Italy will be made through Raytheon A.G., Swiss subsidiary, which has distributors throughout Europe.

Key individuals working on the Selenia formation were Giorgio Valerio, managing director of Societa Edison; Guido Vignuzzi, president of Finmeccanica, and Dr. Carlo Calosi, Raytheon vice president-Europe.

U. B. Crawford Carrier, Radio Engineer—AE Sales

U. B. Crawford Jr. has been named a carrier and radio staff engineer for Automatic Electric Sales.

He has been assigned to the southeastern district, with headquarters in Atlanta, Ga.

Mr. Crawford will provide engineering and consulting service for cus-

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tomers in Alabama, Florida, Georgia, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, and the District of Columbia. His appointment is part of an over-all expansion program to provide improved carrier and radio sales service.

Mr. Crawford, who attended Georgia State College, was formerly associated with American Telephone & Telegraph Co.

Stromberg Wins Highest Safety Award in New York

The National Safety Council recently presented the Stromberg-Carlson Division of General Dynamics Corp. the Award of Honor, its highest citation, for completing 4,330,000 man-hours without a lost-time accident.

Dr. Norvin C. Kiefer, a director of the National Safety Council, presented the plaque to Stromberg-Carlson's president, James D. McLean.

In making the presentation, Dr. Kiefer, who also is chief medical director of the Equitable Life Assurance Society of the U. S., said the award represents an outstanding achievement by Stromberg-Carlson employes and the company. Stromberg's safety manager is Leo A. Miller.

An Award of Honor, the highest citation given by the National Safety Council, was presented at Rochester, N. Y., recently to Stromberg-Carlson in recognition of completion of 4,330,000 man-hours of work without a lost-time accident. Dr. Norvin C. Kiefer (left), a director of the National Safety Council, presents the award plaque to James D. McLean, Stromberg-Carlson president, as Leo A. Miller, company safety manager, and Dr. Fred J. Weismiller, Stromberg medical director, look on. This Stromberg safety record spanned a four-month period, from Dec. 14, 1959, to Apr. 8, 1960.

Earlier in May, Stromberg's Telecommunication Division received the Grand Award in the annual safety contest of the Associated Industries of New York. Stromberg's other two Rochester divisions, Electronics and Commercial Products, also received citations for perfect records, although their totals of man-hours worked were smaller. This state campaign covered the first three months of this year.

The company's national safety record actually spanned a four-month period from Dec. 14, 1959, to Apr. 8, 1960. After authorization of the award

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The 455A Amplifier is a transistorized repeater type amplifier wrapping up a compact package of gain for telephone circuit use. Incorporates the gain, power handling capacity, frequency response, plug-in features in the physical size of vacuum tube type repeater. Ten repeaters go in the same standard rack mount used for vacuum tube types. Operates on 48 volt DC @ 22 ma. Since it is transistorized no 130 volt supply is needed. For details, write for Altec Lansing Bulletin #13385.

The 529A Power Supply, designed for standard rack mounting, occupies only 3½" of panel space. Operates from 117 volt, 50/60 cycle AC line and delivers 20 volts DC at 3 amps., (0.3 amp at each of ten separate outlets). Maximum ripple content is below 0.002 volts at operating voltage, insuring extremely low noise and high efficiency amplifier operation. Each power outlet is individually fused with a 3/10 amp. fuse. DC voltmeter and rotary selector switch to check each distribution outlet are incorporated on front panel. Variable resistor located on panel front permits adjustment of output voltage to suit load conditions. The 529A can be used with Altec Transistorized Repeaters 477A, 449A, 450A and 453A. Write for Bulletin #13224.

For complete information about Altec telephone and paging equipment write to the address below or call PRospect 4-2900 in Anaheim or ALgonquin 5-3636 in New York.

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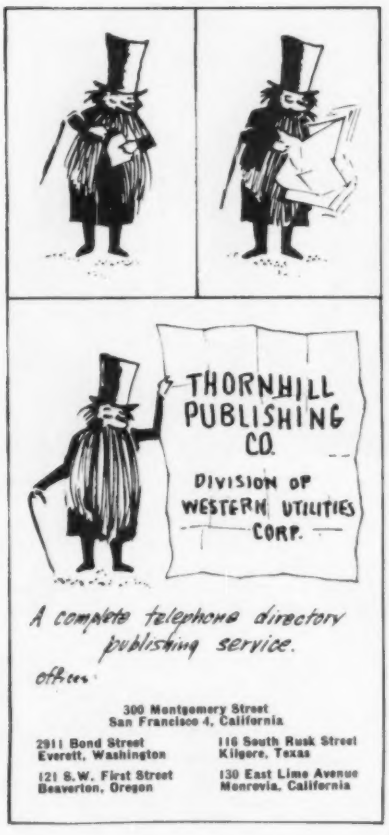

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NATCO CORPORATION

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by the National Safety Council, Stromberg-Carlson employes worked another 400,000 man-hours, for a grand total of 4,713,256 man-hours without a lost-time accident.

Reliable Electric Appoints M. D. Dial Sales Engineer

Reliable Electric Co. announced on June 10 the appointment of M. D. Dial as sales engineer for the eastern part of Texas, for Louisiana, and the southern part of Mississippi.

M. D. DIAL

Mr. Dial is headquartered in Lufkin, Tex., and reports to Reliable's manager, Wallace Johnson.

Mr. Dial spent the past 10 years with Socony and Standard Oil of New Jersey affiliates in South America and in the Far East; and worked, for the last three years, at Cartagena, Colombia, S. A., with the International Petroleum Co. He has been in charge of electrical and communications groups in each assignment.

He is an associate member of the American Institute of Electrical Engineers.

GT&E International Elects Counsel and Controller

Wallace G. Dempsey has been elected vice president and general counsel, and Joseph A. Rodriguez has been elected controller of General Telephone & Electronics International, Inc., Gene K. Beare, president, announced on June 8.

The new GT&E subsidiary has overall responsibility for the international operations of Sylvania Electric Products Inc. and Lenkurt Electric Co., Inc.

Born in Chicago, Ill., Mr. Dempsey was graduated from Columbia University with a B.S. degree in Electrical Engineering in 1945. Three years later, he obtained his LL.B. degree from the Columbia Law School.

W. G. DEMPSEY

Following graduation, Mr. Dempsey was employed by a Washington, D. C., law firm, and later worked with the U. S. High Commission for Germany as legal officer from 1950 to 1952.

He subsequently joined Sylvania Electric Products Inc., as counsel for the International division.

J. A. RODRIGUEZ

Mr. Rodriguez also was born in Chicago. He attended the University of Pittsburgh, and was graduated with a B.S. degree in business administration in 1946.

From 1946 to 1953, Mr. Rodriguez was employed by a subsidiary of U. S. Steel Corp., National Tube Co., where he held a variety of positions in the field of cost analysis and cost accounting. He joined Sylvania in 1953, where he served on the corporate controller's staff until his appointment as controller of Sylvania Electric (Canada) Ltd., in 1954.

In 1958, Mr. Rodriguez became manager of internal auditing for Sylvania Electric Products Inc.

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An INTRODUCTION to SEMICONDUCTORS

By W. CRAWFORD DUNLAP, Jr. Offers a survey of *all* the important aspects of semiconductors—from research to devices. Covers fundamental concepts, properties of materials, methods of measurement, and applications from a unified point of view. The treatment is almost entirely physical, the emphasis being on mechanisms and devices. It gives full coverage of germanium and silicon and discusses the properties of many other semiconducting elements and compounds. *1957. 417 pages. $11.75.*

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International Teletronics Names Technical Coordinator

Charles T. Everhart has joined International Teletronics, Inc., as technical coordinator. He will have his headquarters in the company's general office in Dallas, Tex.

Mr. Everhart is a native of Texas. He was graduated from the Capital Engineering Institute, Washington, D. C., after serving with the Armed Forces in the South Pacific during World War II. Mr. Everhart held the position of civilian radar engineer with the United States government until he was recalled to duty in 1950 and assigned to Korea as radar instructor with the Army.

C. T. EVERHART

As technical field engineer with Emerson Radio Corp., Mr. Everhart had several foreign assignments in the electronic and general communication field.

Prior to joining International Teletronics, he was employed by Minneapolis-Honeywell in the industrial systems division as customer service engineer.

Price Vice President Mfg., Sales of GT&E International

Milton M. Price has been elected a vice president of General Telephone & Electronics International, Inc., the newly-formed manufacturing, marketing, and engineering subsidiary of General Telephone & Electronics Corp., it was announced on June 29 by Gene K. Beare, president of GT&E International.

Mr. Price is responsible for all manufacturing, sales, and engineering activities in Mexico and Central America, involving subsidiaries and associated companies. His headquarters are in Mexico City (mailing address: Apartado Postal No. 20642, Mexico City 6, DF, Mexico).

Mr. Price will also continue to serve as a vice president of Automatic Electric International, Inc.

A native of South Dakota, he attended the University of Paris, the Ecole Libre des Sciences Politiques in Paris, and other schools in France and Germany.

After eight years in Europe with a New York investment banking firm, he served as a European correspondent for the Associated Press. He joined Automatic Electric in 1930, and subsequently held various posts in Europe.

Transferred to Chicago in 1939, Mr. Price served from 1940-1944 with Automatic Electric's affiliated operating companies in South America, and in 1944 was appointed export manager of Automatic Electric International, a position he held until his election in December 1955 as a vice president.

GT&E International, together with Automatic Electric International, produces a wide range of products in the communications, electronics, and electrical fields, with subsidiary manufacturing facilities in Canada, Italy, Belgium, Argentina, Brazil, and Mexico. Associated manufacturing companies

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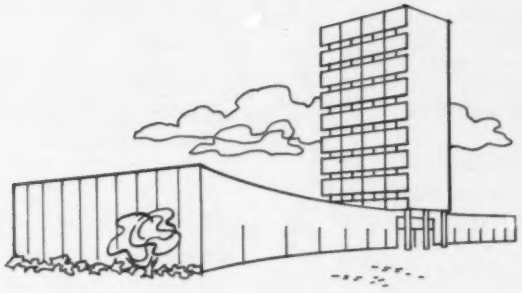

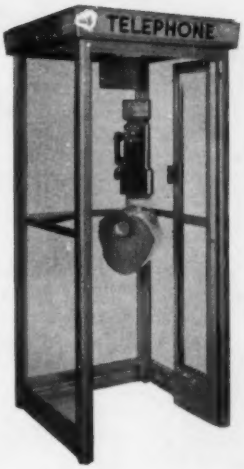

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are located in Great Britain, Italy, Japan and Mexico. In addition, more than 80 international sales offices, agents, and distributors for Automatic Electric and Lenkurt products, and a total of 125 Sylvania international sales offices, agents, and distributors are located abroad.

GT&E International and Automatic Electric International also have responsibility for marketing abroad the products made in the U. S. by Automatic Electric, Sylvania, and Lenkurt, and by Leich Electric Co. and the Electronic Secretary Industries, Inc.

Holan Assigns Mansfield To Sell in Southern States

Donald Rex Mansfield has rejoined the Holan Corp. of Georgia as a sales representative after a two-year tour of duty with the U. S. Army. He will represent the company in Florida, Alabama and Mississippi.

D. R. MANSFIELD

Mr. Mansfield, who lives in Tallahassee, Fla., was with Holan for a year as a salesman prior to his induction into the Army in 1958.

Born in Dresden, Tenn., he studied business administration at the University of Tennessee.

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21 Pair, #19 Ga., As Above	2,100 Ft.
26 Pair, #19 Ga., As Above (800 & 500 Ft. Lengths)	14,000 Ft.
51 Pair, #19 Ga., As Above	2,000 Ft.

OTHER CABLE

11 Pair, #19 Ga. Paper, Lead (4,500 Ft. Reels)	22,000 Ft.
7 Quad. #19 Ga., Paper Lead	100 M Ft.
7 Quad. #19 Ga., Plastic, PVC	5,300 Ft.
37 Quad. #19 Ga., Paper Lead	1,050 Ft.
51 Pair #19 Ga., Paper Lead (plus 4 #16 Shielded Pair with polyeth, insulation) video.	1,200 Ft.
303 Pair, #22 Ga. Ankoseal 775P	2,300 Ft.
5 Pair, #19 Neoprene (Latex Ins.)	50 M Ft.
Spiral 4, 1 Star Quad, #18 Stranded, Neoprene Jacket 3/8" OD. Self-Supporting (also suitable for direct burial). 1,320 Ft. Reels with Quick Connector (6.MH Loading Coils Built Into Connector)	$50 Reel

TERMINALS Lead Stub and no Stub Types
Exterior & Interior—LOADING COILS

DROP WIRE, New #.104 Copperweld 40%, twisted Pair, Heavy Neoprene Jacket ..... $50 M

#18 Ga., Copperweld, Neoprene, Reinforced Parallel, Lengths Average 500 Ft. (Used) ..... $10 M

FILTERS, Carrier H, C, O Type.
538D O Carrier (2198) New, Pole Mtg. ..... $ 50.00

DRAINAGE COILS, #257A Retard, W.E.	5.00
2 Coils on 19" Mtg. with Protectors	10.00
As Above With Galv. Pole Mtg. Can	12.50

PHANTOM COILS, W.E. For Inside or Pole.

COMPOSITE SETS—REPEATERS

POLAR RELAYS, W.E. #255A, Slightly Used	5.00
(Also 209, 239 and 280 Types) New	10.00
Western Union #202A (A.E.) New	15.00
Western Union 2A Spark Killer, 11/44 MF. 1.	1.00
Western Union 255A Relay Test Sets	25.00
Western Electric (Signal Corps) 1-193 Relay Test Sets	100.00
Current Flow Test Set 1-181, Per W. E. D-162269, Brand New	100.00

POLE LINE SPECIALS

Cross Arm Braces, 20"-22"	$ .20
Angle Thimbleye Bolts, 5/8"x14"	.50
3/4"x12"	.50
Lift Plates, 3 Hole, 5/8"	.15
Guy Attachments, Chance 158, 5/8" (Similar to Jos. 6500, Hubb. 1100)	.35
Guy Attachments, Strap Type 1 Hole	.15
2 Hole	.20
Clamps, Ground Rod, Cast Bronze 1/2" (Sq. Head Set Screw) 200 for	25.00
Machine Bolts, 5/8"x12"	.20
Double Arming Bolt, 5/8"x12"	.25
1/2"x22"	.25
Lay-Cit Grips (for Self-Supp. Cable)	.15
Bridging Connectors, W.E. #2A	.05
Lag Wrench, 4 Way to 3/4" Nuts	1.00
Sleeves, Nicopress 1-102-C, per C	3.00
Deadend, 91-102-C, per C	3.50
3-045, per C	2.00
Nicopress Tools, #31-C or CQ	2.50
#17-2	2.00
Grips, Wire, Klein 1613-20	2.00
Buffalo, with Double Block	3.00
Transposition Tool (Running Bd.)	7.50
Cable Car, with Chain & Brake	17.50
Good-Used	10.00
Handline, with Bronze Pulley	7.50
Rings, Cable Hangar, asst. size (Many Other Hardware Items)	

CABLE TEST SETS, Tone, W.E. 1020C (with 716 Receiver & Exploring) $49.50
Less Exploring Coil 39.50

TRANSMISSION MEASURING SETS

W. E. 13A, Reconditioned	$100.00
32A, (Carrier)	100.00
19C, Oscillator	150.00
51A, Oscillator	100.00
Signals Corps 1-61 Combined Oscillator & Trans. Meas.	100.00

TEST BOARDS: Wire Chief's, with L&N Type U Bridge & Galv. for CB-LB Lines & Trunks with 180 Line Jack Field.

Jacks, Plugs, Test & Patch Cords, Relay Racks, Open & Enclosed.

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CENTRAL OFFICE ENGINEERS for assignment in United States and Asia. Must be experienced in manual and dial central office planning and initiation of specifications for implementation. Please send detailed résumé or telephone R. G. Whitmore, HUdson 3-4030. National Scientific Laboratories, Inc., 2010 Massachusetts Ave., N.W., Washington, D. C.

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FEDERAL STEP TWO-WAY REPEATERS CIRCUIT No. 14055 and incoming toll selectors circuit No. 10356C. Write Box No. 4419, c/o TELEPHONY.

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